THE CHRONICLES
OF AMERICA SERIES
ALLEN JOHNSON
EDITOR

THE RAILROAD BUILDERS

JOHN MOODY

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LINKING THE OCEANS

The locomotives *Jupiter*, of the Central Pacific, and *119*, of the Union Pacific, meeting at Promontory Point, Utah, May 10, 1869

From the painting by C. W. Jefferys

THE RAILROAD BUILDERS

A CHRONICLE OF THE WELDING OF THE STATES

BY JOHN MOODY

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CHAPTER I

A CENTURY OF RAILROAD BUILDING

The United States as we know it today is largely the result of mechanical inventions, and in particular of agricultural machinery and the railroad. One transformed millions of acres of uncultivated land into fertile farms, while the other furnished the transportation which carried the crops to distant markets. Before these inventions appeared, it is true, Americans had crossed the Alleghanies, reached the Mississippi Valley, and had even penetrated to the Pacific coast; thus in a thousand years or so the United States might conceivably have become a far-reaching, straggling, loosely jointed Roman Empire, depending entirely upon its oceans, internal watercourses, and imperial highways for such economic and political integrity as it might

achieve. But the great miracle of the nineteenth century — the building of a new nation, reaching more than three thousand miles from sea to sea, giving sustenance to more than one hundred million free people, and diffusing among them the necessities and comforts of civilization to a greater extent than the world had ever known before — is explained by the development of harvesting machinery and of the railroad.

The railroad is sprung from the application of two fundamental ideas — one the use of a mechanical means of developing speed, the other the use of a smooth running surface to diminish friction. Though these two principles are today combined, they were originally absolutely distinct. In fact there were railroads long before there were steam engines or locomotives. If we seek the real predecessor of the modern railroad track, we must go back three hundred years to the wooden rails on which were drawn the little cars used in English collieries to carry the coal from the mines to tidewater. The natural history of this invention is clear enough. The driving of large coal wagons along the public highway made deep ruts in the road, and some ingenious person began repairing the damage by laying wooden planks in the furrows.

The coal wagons drove over this crude roadbed so successfully that certain proprietors started constructing special planked roadways from the mines to the river mouth. Logs, forming what we now call "ties," were placed crosswise at intervals of three or four feet, and upon these supports thin "rails," likewise of wood, were laid lengthwise. So effectually did this arrangement reduce friction that a single horse could now draw a great wagon filled with coal — an operation which two or three teams, lunging over muddy roads, formerly had great difficulty in performing. In order to lengthen the life of the road, a thin sheeting of iron was presently laid upon the wooden rail. The next improvement was an attempt to increase the durability of the wagons by making the wheels of iron. It was not, however, until 1767, when the first rails were cast entirely of iron with a flange at one side to keep the wheel steadily in place, that the modern roadbed in all its fundamental principles made its appearance. This, be it observed, was only two years after Watt had patented his first steam engine, and it was nearly fifty years before Stephenson built his first locomotive. The railroad originally was as completely dissociated from steam propulsion as was the ship. Just as vessels had

existed for ages before the introduction of mechanical power, so the railroad had been a familiar sight in the mining districts of England for at least two centuries before the invention of Watt really gave it wings and turned it to wider uses. In this respect the progress of the railroad resembles that of the automobile, which had existed in crude form long before the invention of the gasoline engine made it practically useful.

In the United States three new methods of transportation made their appearance at almost the same time — the steamboat, the canal boat, and the rail car. Of all three, the last was the slowest in attaining popularity. As early as 1812 John Stevens, of Hoboken, aroused much interest and more amused hostility by advocating the building of a railroad, instead of a canal, across New York State from the Hudson River to Lake Erie, and for several years this indefatigable spirit journeyed from town to town and from State to State, in a fruitless effort to push his favorite scheme. The great success of the Erie Canal was finally hailed as a conclusive argument against all the ridiculous claims made in favor of the railroad and precipitated a canal mania which spread all over the country.

Yet the enthusiasts for railroads could not be discouraged, and presently the whole population divided into two camps, the friends of the canal, and the friends of the iron highway. Newspapers acrimoniously championed either side; the question was a favorite topic with debating societies; public meetings and conventions were held to uphold one method of transportation and to decry the other. The canal, it was urged, was not an experiment; it had been tested and not found wanting; already the great achievement of De Witt Clinton in completing the Erie Canal had made New York City the metropolis of the western world. The railroad, it was asserted, was just as emphatically an experiment; no one could tell whether it could ever succeed; why, therefore, pour money and effort into this new form of transportation when the other was a demonstrated success?

It was a simple matter to find fault with the railroad; it has always been its fate to arouse the opposition of the farmers. This hostility appeared early and was based largely upon grounds that have a familiar sound even today. The railroad, they said, was a natural monopoly; no private citizen could hope ever to own one; it was thus a kind of monster which, if encouraged, would override

all popular rights. From this economic criticism the enemies of the railroad passed to details of construction: the rails would be washed out by rains; they could be destroyed by mischievous people; they would snap under the cold of winter or be buried under the snow for a considerable period, thus stopping all communication. The champions of artificial waterways would point in contrast to the beautiful packet boats on the Erie Canal, with their fine sleeping rooms, their restaurants, their spacious decks on which the fine ladies and gentlemen congregated every warm summer day, and would insist that such kind of travel was far more comfortable than it could ever be on railroads. To all these pleas the advocates of the railroad had one unassailable argument — its infinitely greater speed. After all, it took a towboat three or four days to go from Albany to Buffalo, and the time was not far distant, they argued, when a railroad would make the same trip in less than a day. Indeed, our forefathers made one curious mistake: they predicted a speed for the railroad — a hundred miles an hour — which it has never attained consistently with safety.

If the American of today could transport himself to one of the first railroad lines built in the United

States it is not unlikely that he would side with the canal enthusiast in his argument. The rough pictures which accompany most accounts of early railroad days, showing a train of omnibus-like carriages pulled by a locomotive with upright boiler, really represent a somewhat advanced stage of development. Though Stephenson had demonstrated the practicability of the locomotive in 1814 and although the American, John Stevens, had constructed one in 1826 which had demonstrated its ability to take a curve, local prejudice against this innovation continued strong. The farmers asserted that the sparks set fire to their hayricks and barns and that the noise frightened their hens so that they would not lay and their cows so that they could not give milk. On the earliest railroads, therefore, almost any other method of propulsion was preferred. Horses and dogs were used, winches turned by men were occasionally installed, and in some cases cars were even fitted with sails. Of all these methods, the horse was the most popular: he sent out no sparks, he carried his own fuel, he made little noise, and he would not explode. His only failing was that he would leave the track; and to remedy this defect the early railroad builders hit upon a happy device. Sometimes they would fix a

treadmill inside the car; two horses would patiently propel the caravan, the seats for passengers being arranged on either side. So unformed was the prevalent conception of the ultimate function of the railroad, and so pronounced was the fear of monopoly that, on certain lines, the roadbed was laid as a state enterprise and the users furnished their own cars, just as the individual owners of towboats did on the canals. The drivers, however, were an exceedingly rough lot; no schedules were observed and as the first lines had only single tracks and infrequent turnouts, when the opposing sides would meet each other coming and going, precedence was usually awarded to the side which had the stronger arm. The roadbed showed little improvement over the mine tramways of the eighteenth century, and the rails were only long wooden stringers with strap iron nailed on top. So undeveloped were the resources of the country that the builders of the Baltimore and Ohio Railroad in 1828 petitioned Congress to remit the duty on the iron which it was compelled to import from England. The trains consisted of a string of little cars, with the baggage piled on the roof, and when they reached a hill they sometimes had to be pulled up the inclined plane by a rope. Yet the traveling in these earliest days

was probably more comfortable than in those which immediately followed the general adoption of locomotives. When, five or ten years later, the advantages of mechanical as opposed to animal traction caused engines to be introduced extensively, the passengers behind them rode through constant smoke and hot cinders that made railway travel an incessant torture.

Yet the railroad speedily demonstrated its practical value; many of the first lines were extremely profitable, and the hostility with which they had been first received soon changed to an enthusiasm which was just as unreasoning. The speculative craze which invariably follows a new discovery swept over the country in the thirties and the forties and manifested itself most unfortunately in the new Western States — Ohio, Indiana, Illinois, and Michigan. Here bonfires and public meetings whipped up the zeal; people believed that railroads would not only immediately open the wilderness and pay the interest on the bonds issued to construct them, but that they would become a source of revenue to sadly depleted state treasuries. Much has been heard of government ownership in recent years; yet it is nothing particularly new, for many of the early railroads in these new Western States

were built as government enterprises, with results which were frequently disastrous. This mania, with the land speculation accompanying it, was largely responsible for the panic of 1837 and led to that repudiation of debts in certain States which for so many years gave American investments an evil reputation abroad.

In the more settled parts of the country, however, railroad building had comparatively a more solid foundation. Yet the railroad map of the forties indicates that railroad building in this early period was incoherent and haphazard. Practically everywhere the railroad was an individual enterprise; the builders had no further conception of it than as a line connecting two given points usually a short distance apart. The roads of those days began anywhere and ended almost anywhere. A few miles of iron rail connected Albany and Schenectady. There was a road from Hartford to New Haven, but there was none from New Haven to New York. A line connected Philadelphia with Columbia; Baltimore had a road to Washington; Charleston, South Carolina, had a similar contact with Hamburg in the same State. By 1842, New York State, from Albany to Buffalo, possessed several disconnected stretches of railroad. It was

not until 1836, when work was begun on the Erie Railroad, that a plan was adopted for a single line reaching several hundred miles from an obvious point, such as New York, to an obvious destination, such as Lake Erie. Even then a few far-sighted men could foresee the day when the railroad train would cross the plains and the Rockies and link the Atlantic and the Pacific. Yet, in 1850 nearly all the railroads in the United States lay east of the Mississippi River, and all of them, even when they were physically mere extensions of one another, were separately owned and separately managed.

Successful as many of the railroads were, they had hardly yet established themselves as the one preëminent means of transportation. The canal had lost in the struggle for supremacy, but certain of these constructed waterways, particularly the Erie, were flourishing with little diminished vigor. The river steamboat had enjoyed a development in the first few decades of the nineteenth century almost as great as that of the railroad itself. The Mississippi River was the great natural highway for the products and the passenger traffic of the South Central States; it had made New Orleans one of the largest and most flourishing cities in the

country; and certainly the rich cotton planter of the fifties would have smiled at any suggestion that the "floating palaces" which plied this mighty stream would ever surrender their preëminence to the rusty and struggling railroads which wound along its banks.

This period, which may be taken as the first in American railroad development, ended about the middle of the century. It was an age of great progress but not of absolutely assured success. A few lines earned handsome profits, but in the main the railroad business was not favorably regarded and railroad investments everywhere were held in suspicion. The condition that prevailed in many railroads is illustrated by the fact that the directors of the Michigan and Southern, when they held their annual meeting in 1853, had to borrow chairs from an adjoining office as the sheriff had walked away with their own for debt. Even a railroad with such a territory as the Hudson River Valley, and extending from New York to Albany existed in a state of chronic dilapidation; and the New York and Harlem, which had an entrance into New York City as an asset of incalculable value, was looked upon merely as a vehicle for Wall Street speculation.

Meanwhile the increasing traffic in farm products, mules, and cattle from the Northwest to the plantations of the South created a demand for more ample transportation facilities. In the decade before the Civil War various north and south lines of railway were projected and some of these were assisted by grants of land from the Federal Government. The first of these, the Illinois Central, received a huge land-grant in 1850 and ultimately reached the Gulf at Mobile by connecting with the Mobile and Ohio Railroad which had also been assisted by Federal grants. But the panic of 1857, followed by the Civil War, halted all railroad enterprises. In the year 1856 some 3600 miles of railroad had been constructed; in 1865 only 700 were laid down. The Southern railroads were prostrated by the war and north and south lines lost all but local traffic.

After the war a brisk recovery began and brought to the fore the first of the great railroad magnates and the shrewdest business genius of the day, Cornelius Vanderbilt. Though he had spent his early life and had laid the basis of his fortune in steamboats, he was the first man to appreciate the fact that these two methods of transportation were about to change places — that water transportation

was to decline and that rail transportation was to gain the ascendancy. It was about 1865 that Vanderbilt acted on this farsighted conviction, promptly sold out his steamboats for what they would bring, and began buying railroads despite the fact that his friends warned him that, in his old age, he was wrecking the fruits of a hard and thrifty life. But Vanderbilt perceived what most American business men of the time failed to see, that a change had come over the railroad situation as a result of the Civil War.

The time extending from 1860 to about 1875 marks the second stage in the railroad activity of the United States. The characteristic of this period is the development of the great trunk lines and the construction of a transcontinental route to the Pacific. The Civil War ended the supremacy of the Mississippi River as the great transportation route of the West. The fact that this river ran through hostile territory — Vicksburg did not fall until July 4, 1863 — forced the farmers of the West to find another outlet for their products. By this time the country from Chicago and St. Louis eastward to the Atlantic ports was fairly completely connected by railroads. The necessities of war led to great improvements in construction and equip-

DEVELOPMENT OF RAILROADS IN THE UNITED STATES

PREPARED FOR THE CHRONICLES OF AMERICA UNDER THE DIRECTION OF W. L. G. JOERG, AMERICAN GEOGRAPHICAL SOCIETY

ment. Business which had hitherto gone South now began to go East; New Orleans ceased to be the great industrial entrepôt of this region and gave place to St. Louis and Chicago.

Yet, though this great change in traffic routes took place in the course of the war, the actual consolidations of the various small railroads into great trunk lines did not begin until after peace had been assured. The establishment of five great railroads extending continuously from the Atlantic seaboard to Chicago and the West was perhaps the most remarkable economic development of the ten or fifteen years succeeding the war. By 1875 these five great trunk lines, the New York Central, the Pennsylvania, the Erie, the Baltimore and Ohio, and the Grand Trunk, had connected their scattered units and established complete through systems.

All the vexations that had necessarily accompanied railroad traffic in the days when each one of these systems had been a series of disconnected roads had disappeared. The grain and meat products of the West, accumulating for the most part at Chicago and St. Louis, now came rapidly and uninterruptedly to the Atlantic seaboard, and railroad passengers, no longer submitted to the inconveniences of the Civil War period, now began

to experience for the first time the pleasures of railroad travel. Together with the articulation of the routes, important mechanical changes and reconstruction programmes completely transformed the American railroad system. The former haphazard character of each road is evidenced by the fact that in Civil War days there were eight different gages, with the result that it was almost impossible for the rolling stock of one line to use another. A few years after the Civil War, however, the present standard gage of four feet eight and one-half inches had become uniform all over the United States. The malodorous "eating cribs" of the fifties and the sixties — little station restaurants located at selected spots along the line — now began to disappear, and the modern dining car made its appearance. The old rough and ready sleeping cars began to give place to the modern Pullman. One of the greatest drawbacks to ante-bellum travel had been the absence of bridges across great rivers, such as the Hudson and the Susquehanna. At Albany, for example, the passengers in the summer time were ferried across, and in winter they were driven in sleighs or were sometimes obliged to walk across the ice. It was not until after the Civil War that a great iron bridge, two thousand feet long, was

constructed across the Hudson at this point. On the trains the little flickering oil lamps now gave place to gas, and the wood burning stoves — frequently in those primitive days smeared with tobacco juice — in a few years were displaced by the new method of heating by steam.

The accidents which had been almost the prevailing rule in the fifties and sixties were greatly reduced by the Westinghouse air-brake, invented in 1868, and the block signaling system, introduced somewhat later. In the ten years succeeding the Civil War, the physical appearance of the railroads entirely changed; new and larger locomotives were made, the freight cars, which during the period of the Civil War had a capacity of about eight tons, were now built to carry fifteen or twenty. The former little flimsy iron rails were taken up and were relaid with steel. In the early seventies when Cornelius Vanderbilt substituted steel for iron on the New York Central, he had to import the new material from England. In the Civil War period, practically all American railroads were single track lines — and this alone prevented any extensive traffic. Vanderbilt laid two tracks along the Hudson River from New York to Albany, and four from Albany to Buffalo, two exclusively for freight

and two for passengers. By 1880 the American railroad, in all its essential details, had definitely arrived.

But in this same period even more sensational developments had taken place. Soon after 1865 the imagination of the American railroad builder began to reach far beyond the old horizon. Up to that time the Mississippi River had marked the Western railroad terminus. Now and then a road straggled beyond this barrier for a few miles into eastern Iowa and Missouri; but in the main the enormous territory reaching from the Mississippi to the Pacific Ocean was crossed only by the old trails. The one thing which perhaps did most to place the transcontinental road on a practical basis was the annexation of California in 1848; and the wild rush that took place on the discovery of the gold fields one year later had led Americans to realize that on the Pacific coast they had an empire which was great and incalculably rich but almost inaccessible. The loyalty of California to the Northern cause in the war naturally stimulated a desire for closer contact. In the ten years preceding 1860 the importance of a transcontinental line had constantly been brought to the attention of Congress and the project had caused much jealousy between

the North and the South, for each region desired to control its Eastern terminus. This impediment no longer stood in the way; early in his term, therefore, President Lincoln signed the bill authorizing the construction of the Union Pacific — a name doubly significant, as marking the union of the East and the West and also recognizing the sentiment of loyalty or union that this great enterprise was intended to promote. The building of this railroad, as well as that of the others which ultimately made the Pacific and the Atlantic coast near neighbors — the Santa Fé, the Southern Pacific, the Northern Pacific, and the Great Northern — is described in the pages that follow. Here it is sufficient to emphasize the fact that they achieved the concluding triumph in what is certainly the most extensive system of railroads in the world. These transcontinental roads really completed the work of Columbus. He sailed to discover the western route to Cathay and found that his path was blocked by a mighty continent. But the first train that crossed the plains and ascended the Rockies and reached the Golden Gate assured thenceforth a rapid and uninterrupted transit westward from Europe to Asia.

CHAPTER II

THE COMMODORE AND THE NEW YORK CENTRAL

A STORY was told many years ago of Commodore Vanderbilt which, while perhaps not strictly true, was pointed enough to warrant its constant repetition for more than two generations. Back in the sixties, when this grizzled railroad chieftain was the chief factor in the rapidly growing New York Central Railroad system, whose backbone then consisted of a continuous one-track line connecting Albany with the Great Lakes, the president of a small cross-country road approached him one day and requested an exchange of annual passes.

"Why, my dear sir," exclaimed the Commodore, "my railroad is more than three hundred miles long, while yours is only seventeen miles."

"That may all be so," replied the other, "but my railroad is just as wide as yours."

This statement was true. Practically no railroad, even as late as the sixties, was wider than

another. They were all single-tracked lines. Even the New York Central system in 1866 was practically a single-track road; and the Commodore could not claim to any particular superiority over his neighbors and rivals in this particular. Instead of sneering at his "seventeen-mile" colleague, Vanderbilt might have remembered that his own fine system had grown up in less than two generations from a modest narrow-gage track running from "nothing to nowhere." The Vanderbilt lines, which today with their controlled and affiliated systems comprise more than 13,000 miles of railroad — a large portion of which is double-tracked, no mean amount being laid with third and fourth tracks — is the outgrowth of a little seventeen-mile line, first chartered in 1826, and finished for traffic in 1831. This little railroad was known as the Mohawk and Hudson, and it extended from Albany to Schenectady. It was the second continuous section of railroad line operated by steam in the United States, and on it the third locomotive built in America, the *De Witt Clinton*, made a satisfactory trial trip in August, 1831.

The success of this experiment created a sensation far and wide and led to rapid railroad building in other parts of the country in the years

immediately following. The experiences of a participant in this trial trip are described about forty years later in a letter written by Judge J. L. Gillis of Philadelphia:

In the early part of the month of August of that year [1831], I left Philadelphia for Canandaigua, New York, traveling by stages and steamboats to Albany and stopping at the latter place. I learned that a locomotive had arrived there and that it would make its first trip over the road to Schenectady the next day. I concluded to lie over and gratify my curiosity with a first ride after a locomotive.

That locomotive, the train of cars, together with the incidents of the day, made a very vivid impression on my mind. I can now look back from one of Pullman's Palace cars, over a period of forty years, and see that train together with all the improvements that have been made in railroad travel since that time. . . . I am not machinist enough to give a description of the locomotive that drew us over the road that day, but I recollect distinctly the general make-up of the train. The train was composed of coach bodies, mostly from Thorpe and Sprague's stage coaches, placed upon trucks. The trucks were coupled together with chains, leaving from two to three feet slack, and when the locomotive started it took up the slack by jerks, with sufficient force to jerk the passengers who sat on seats across the tops of the coaches, out from under their hats, and in stopping, came together with such force as to send them flying from the seats.

They used dry pitch for fuel, and there being no smoke or spark catcher to the chimney or smoke-stack, a volume of black smoke, strongly impregnated with sparks, coals, and cinders, came pouring back the whole length of the train. Each of the tossed passengers who had an umbrella raised it as a protection against the smoke and fire. They were found to be but a momentary protection, for I think in the first mile the last umbrella went overboard, all having their covers burnt off from the frames, when a general *mêlée* took place among the deck passengers, each whipping his neighbor to put out the fire. They presented a very motley appearance on arriving at the first station. Then rails were secured and lashed between the trucks, taking the slack out of the coupling chains, thereby affording us a more steady run to the top of the inclined plane at Schenectady.

The incidents off the train were quite as striking as those on the train. A general notice of the contemplated trip had excited not only the curiosity of those living along the line of the road, but those living remote from it, causing a large collection of people at all the intersecting roads along the route. Everybody, together with his wife and all his children, came from a distance with all kinds of conveyances, being as ignorant of what was coming as their horses, and drove up to the road as near as they could get, only looking for the best position to get a view of the train. As it approached the horses took fright and wheeled, upsetting buggies, carriages, and wagons, and leaving for parts unknown to the passengers if not to their owners, and it is not now positively known if some of them have stopped yet.

Such is a hasty sketch of my recollection of my first ride after a locomotive.

The Mohawk and Hudson Railroad was originally constructed with inclined planes worked by stationary engines near each terminus, the inclinations being one foot in eighteen. The rail used was a flat bar laid upon longitudinal sills. This type of rail came into general use at this period and continued in use in parts of the country even as late as the Civil War.

The roads that now make up the New York Central were built piecemeal from 1831 to 1853; and the organization of this company in the latter year, to consolidate eleven independent roads extending from Albany to Buffalo, finally put an end to the long debate between canals and railroads. The founding of this company definitely meant that transportation in the United States henceforth would follow the steel route and not the water ditch and the towpath. Canals might indeed linger for a time as feeders, even, as in the case of the Erie and a few others, as more or less important transportation routes, but every one now realized that the railroad was to be the great agency which would give plausibility to the industrial organization of the United States and develop its great territory.

Besides the pioneer Mohawk and Hudson, this consolidation included the Utica and Schenectady, which had been opened in 1836 and which had operated profitably for many years, always paying large dividends. The Tonawanda Railroad, opened in 1837, and the Buffalo and Niagara Falls, also finished in the same year, were operated with profit until they were absorbed by the new system. In 1838 the Auburn and Syracuse and the Hudson and Berkshire Railroads were opened. The former after being merged in 1850 with the Rochester and Syracuse Railway, became a part of the consolidation. The Syracuse and Attica Railroad, opened in 1839, the Attica and Buffalo, opened in 1842, the Schenectady and Troy, opened in the same year, and several other small lines, some of which had undergone various changes in name and ownership, were all merged into the New York Central Railroad. This great property now comprised five hundred and sixty miles of railroad, the main stem extending from Albany to Buffalo. Though it had as yet no connection with the Hudson River Railroad, the New York Central Railroad at this period was the most substantial and important of American railroad systems. It developed a large and healthy through traffic to the Great Lakes and

was practically free from railroad competition. The Erie Railway, which for many years had been struggling under great difficulties to reach the Great Lakes and had gone through nearly a generation of financial vicissitudes, was just getting its through line actively under way. The Pennsylvania Railroad was just pushing through to the waters of the Ohio and was not likely for many years to compete with the New York Central for the lake traffic. The Baltimore and Ohio, while remotely a competitor, was, like the Pennsylvania, looking more for the traffic of the Ohio Valley than for that of the Lakes.

The period of six years following the consolidation of 1853 was one of great prosperity for the New York Central system, and, notwithstanding the setbacks to business caused by the panic of 1857, large dividends were continuously paid on the capital stock. In the year 1859 — before the Vanderbilt régime opened — the management embraced what to modern men of affairs are famous names. Erastus Corning was president, Dean Richmond was vice-president, and John V. L. Pruyn, Nathaniel Thayer, Isaac Townsend, and Chauncey Vibbard were directors. The headquarters of the company were at Albany, and the stock was owned mainly by residents of that city.

Meanwhile the building of railroads in other parts of the State and under other leadership was going forward rapidly. As far back as 1832 the first mile of the New York and Harlem Railroad was opened for traffic. This single mile remained for some time the only property of the company. It extended through what is now a thriving part of down-town New York. Its original terminus was at Prince Street, but the line was afterwards extended southward to the City Hall and later to the Astor House. It was not until 1837 that the road reached northward to Harlem and not until 1842 that Williamsbridge became the northern terminus. The line was looked upon as a worthless piece of property until 1852, when it was extended north to Chatham, to connect with the Albany and Stockbridge Railroad, and thus give a through line from New York City to Albany.

Another property built in these days and destined to become eventually an important part of the Vanderbilt lines was the Hudson River Railroad. This company was chartered in 1846, but for many years was frowned on as an unsound business venture, because of the belief that it would be in direct competition with the river traffic and therefore could never be made to pay.

Nevertheless the promoters went ahead and by 1850 the road had been opened to Poughkeepsie. The entire line of one hundred and forty-four miles was completed to East Albany in 1851. At the same time the Troy and Greenbush Railroad, extending six miles to Troy, was leased, thus giving the new Hudson River Railroad an entry into the city of Troy. The Hudson River Railroad was entirely independent of the New York Central enterprise and was controlled in those early days by a group of New Yorkers, prominent among whom was Samuel Sloan.

As we enter the Civil War period, we find the three important properties which were afterwards to make up the Vanderbilt system all developing rapidly and logically into the strategical relationship which would make ultimate consolidation inevitable. The completion of the Erie Railway and its gradual development as the only through line across the State from New York to the Great Lakes; the opening, expansion, and general solidification of the Pennsylvania lines and their aggressive policy of reaching out to the lake region on the west and across New Jersey on the east; the extension of the Erie interests into the New England field, and the possibility that the latter might gain

control of the Harlem or the Hudson River Railroad — all these considerations naturally aroused in the New York Central interests a desire to insure the future by obtaining for themselves control of the lines that would connect their own system with New York City and the Eastern seaboard.

During the Civil War, however, no progress was made in this direction. It was not until 1869, four years after the closing of the war, that any radical change took place. But in the years that had intervened, a new and commanding figure in the railroad world had come upon the scene. This man had grown to be the dominating genius, not only in the field of railway expansion, but in the world of finance as well. His name was Cornelius Vanderbilt. Born in 1794 in very humble circumstances, he had received little or no education, and as a youth had eked out a living by ferrying passengers and garden produce from Staten Island to New York. He had painfully saved a few hundred dollars within a year or two after his marriage, and with this capital he began his career in the transportation business. From his first ferrying project he engaged in other undertakings and laid the foundation of his subsequent fortune in steamboat navigation. About 1860, at an age when most

men are beginning to retire from active affairs, the "Commodore" — as he was called on account of his numerous fleet — entered actively into the field of railway development, management, and consolidation. The extraordinary character and genius of the man are well depicted by the events of the years that followed.

Before the opening of the Civil War and until immediately after its end, the New York Central and the Erie systems were controlled by bitterly antagonistic interests. These interests were beginning to foresee the day when extremely aggressive competition would call into play their greatest energies. Vanderbilt, wiser than his generation, foresaw more than this. His vision took in the vast future values of the properties as developed trunk lines, and the greater possibilities of their control and operation as a consolidated whole. He was in a very real sense the forerunner or pioneer of the great consolidation period of a half century later. He was the Harriman and the Hill of his day.

The Erie had its own approach to New York City, but the New York Central was connected with the metropolis only by the river and the two independent roads — the Harlem Railroad

and the Hudson River Railroad. To get the latter two roads under his complete control was Vanderbilt's first object. He would then have unimpeded access to New York and so become independent of the river.

He began his ambitious plans by making himself the master of the Harlem property, and in so doing got his first experience in railroad stock manipulation and at the same time picked up a moderate fortune. It was comparatively easy to buy the control of the Harlem Railroad. The Company had never paid a dividend, and, in 1863, when the Commodore quietly began his work, the stock was selling below thirty dollars a share. Before the close of this year he had manipulated the stock until it had reached ninety-two, and by a corner, in August of that year, he raised it to 179. On this deal Vanderbilt reaped a nice little fortune — but evidently not enough to enable him to carry through the ambitious plans which were in the back of his head, for in 1864 we find him manipulating another corner and this time running the price of the stock up to 285. In this wise the Commodore not only added millions to his already growing fortune but also made himself a power in the financial world. Financiers began to fear him,

and he found it comparatively easy later to buy up the control of the Hudson River Railroad, which he did by paying about 100 for the stock. Then he began speculating again, sent Hudson River up to 180, and incidentally reaped another fortune for himself.

By this time Vanderbilt had achieved a great reputation as a man who created values, earned dividends, and invented wealth as if by magic; other railroad managers now began to lay their properties at his feet and ask him to do with them what he had done with the Harlem and the Hudson River. For under the Commodore's magic touch the Harlem Railroad for the first time in its long history began to pay dividends at a high rate, and in four years the earnings of the Hudson River property had nearly doubled.

One of the first properties to be placed at Vanderbilt's feet was the New York Central, and the control passed into his hands in the winter of 1866–67. He was now in a powerful position and immediately began to lay his plans for obtaining control of the Erie Railroad in the following year. In the latter effort he did not succeed, however, and after a protracted and dramatic contest he was defeated by his great adversary, "Uncle"

Daniel Drew. The story of this contest need not be detailed here, as it is given in full in the chapter on the Erie Railroad.

In the fall of 1869 the Commodore, having secured everything in the railroad field he had sought except the Erie, put through his scheme for consolidation. The New York Central and Hudson River Railroad was incorporated. It included the old New York Central and also the Hudson River Railroad but not the Harlem. The capital of the consolidated company was placed at ninety million dollars, a figure of such magnitude in those days that the world was startled. The system embraced in all nearly 850 miles of railroad lines. A few years later the Harlem Railroad was leased to the property at a high valuation and a large dividend was guaranteed on the stock, the ownership of which was retained by the Vanderbilt family.

The Vanderbilt system as it is now understood really began with these transactions. From this time on, its history has been similar in many respects to that of other large systems which were the outgrowth of merger or manipulation in these early days. During the remarkable period of commercial and industrial development in this country from 1870 onward, when thousands of miles of

new lines were built every year, when the growth of population was beginning to make the States of Ohio, Indiana, and Illinois centers of wealth and production, and when the wonderful Northwestern country embracing the States of Michigan, Wisconsin, and Minnesota, was so rapidly opened up and brought nearer to the Eastern markets, the Vanderbilt railroad interests were not idle. The original genius, Cornelius Vanderbilt, was soon gathered to his fathers, but his son, William H. Vanderbilt, was in many ways a worthy successor.

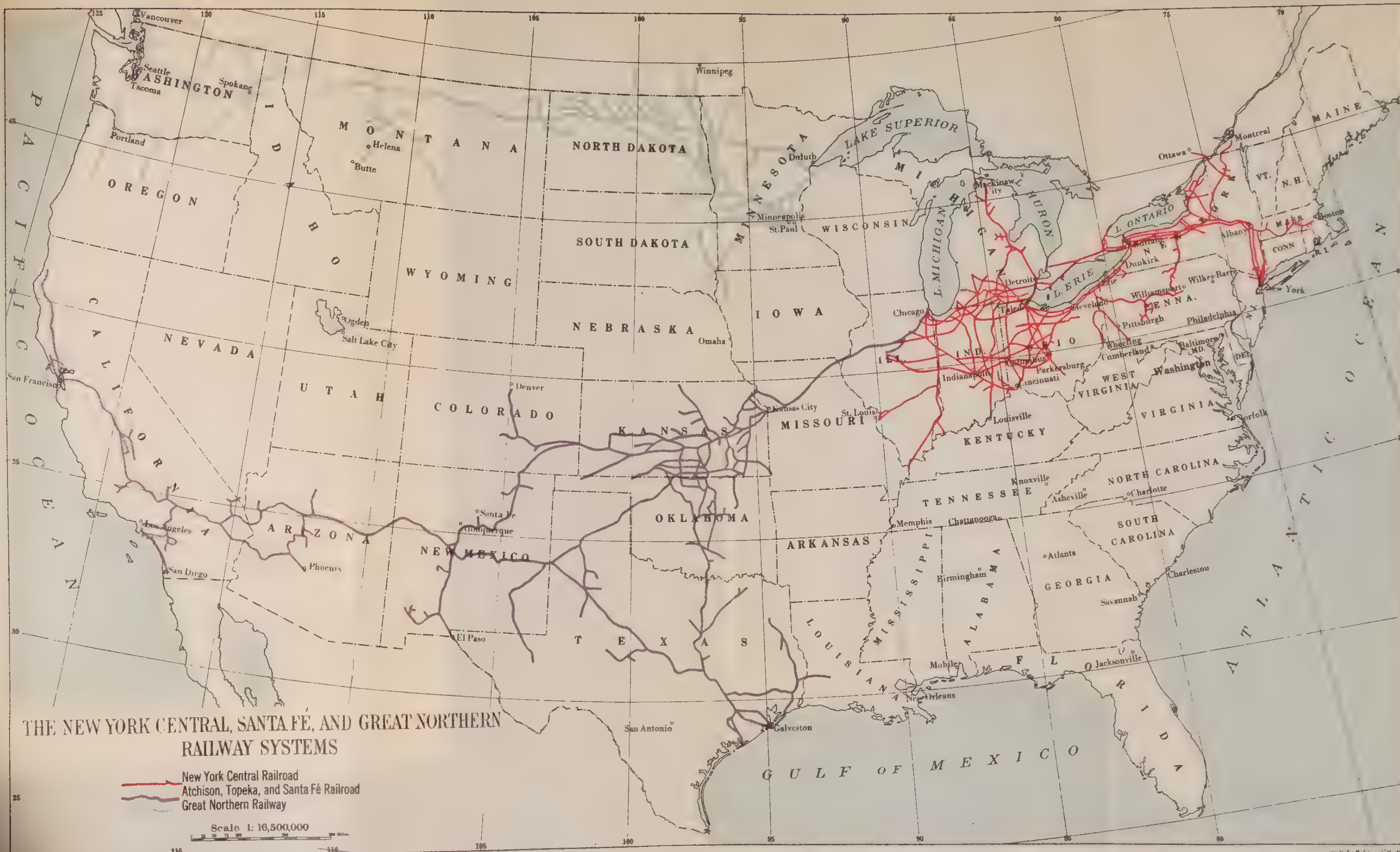
By 1885 the Vanderbilt lines had grown in extent and importance far beyond any point of which the elder Vanderbilt had ever dreamed. Long before this year the system included many smaller lines within the State of New York, and it had also acquired close control of the great Lake Shore and Michigan Southern system, with its splendid line from Buffalo to Chicago, consisting of more than 500 miles of railroad; the Michigan Central, owning lines from Detroit to Chicago, with many branches in Michigan and Illinois; the Canada Southern Railway, extending from Detroit to Toronto; and in addition to all these about 800 miles of other lines in the States of Ohio, Indiana, Michigan, and Pennsylvania.

In this same year 1885, another event of importance took place. The New York, West Shore and Buffalo Railroad, which after strenuous efforts extending over many years had constructed a new trunk line from Weehawken along the west shore of the Hudson to Albany and thence to Buffalo, came under the control of the New York Central. The great system in the Middle West, now known as the "Big Four," or Cleveland, Cincinnati, Chicago and St. Louis — embracing 750 miles of lines westward from Cleveland and Columbus, Ohio, to Indianapolis, Springfield, and Cincinnati, and having traffic connections with St. Louis — was also a Vanderbilt property at this time, although not under the formal control of these interests. Another important competing line secured in this period was the New York, Chicago and St. Louis, built to parallel the Lake Shore and known as the "Nickel Plate" route. This road extended from Buffalo to Chicago, and, like the West Shore, had been constructed with the hope of ultimately selling out to its competitor.

The development of railroad properties under the Vanderbilt influence was not confined to the territory east of Chicago and the Mississippi Valley. As early as 1859 a large system of roads had

been merged in the section extending westward from Chicago to Omaha and radiating throughout Iowa, Minnesota, Kansas, Wisconsin, Missouri, and other States. This company was known as the Chicago and North Western Railroad, and its property, which was one of large and growing value, by 1886 embraced a system of over 3500 miles of road. Although neither controlled by the New York Central nor directly affiliated therewith, it was classed as a Vanderbilt property.

While for many years after the death of the Commodore the Vanderbilt family remained in direct financial and operating control of the New York Central and its myriad of subsidiary lines and their genius as railroad builders and operators was distinctly evident, yet the brains and resources of the Vanderbilts were not alone responsible for the brilliant career of the system down to recent times. William H. Vanderbilt, though a man of unusual ability, did not possess the breadth of view or the sagacity of his father, and in the course of a few years he found himself exposed to a cyclone of public criticism. He had let it be widely known that he was personally the owner of over eighty-seven per cent of the hundred million capital of the company. In 1879 the New York Legislature,



THE NEW YORK CENTRAL, SANTA FÉ, AND GREAT NORTHERN RAILWAY SYSTEMS

PREPARED FOR THE CHRONICLES OF AMERICA UNDER THE DIRECTION OF W. L. G. JOERG, AMERICAN GEOGRAPHICAL SOCIETY

backed by the force of the popular anger and surprise at the accumulation of a hundred million dollar fortune by one man in ten years, was investigating the management of the New York Central with a view to curtailing its power; the rate wars were on between the seaboard and Chicago; and Jay Gould was threatening to divert all the traffic of his Wabash, St. Louis, and Pacific lines from the New York Central and turn it over to other Eastern connections unless Vanderbilt would give him a vital interest in the Vanderbilt lines.

Vanderbilt was harassed beyond endurance and, being of softer material than his father, was fearful of the outcome of public opinion, notwithstanding the fact that in a moment of anger — according to the statement of a newspaper reporter whose veracity Vanderbilt denied to his dying day — he had used the familiar expression, "The public be damned!" There were intimations that the Legislature was planning to impose heavy taxes on the property, solely because Vanderbilt held this gigantic personal ownership in the property. This prospect frightened him and he consulted friends whose judgment he respected. They urged him to sell a considerable part of his holdings in order to

distribute the ownership of the property among a large number of people.

This plan could not be carried out, however, in the ordinary way, because large sales of stock by the Vanderbilt interests, if the speculating and investing public learned that he was making them, would greatly depreciate the price and might create general demoralization and a panic, while they would certainly injure the credit of the New York Central property. But a way out of the dilemma had to be found. It was at this juncture that a new personality, later to be closely identified with the Vanderbilt lines for a long series of years, appeared upon the scene. Vanderbilt was advised to consult J. Pierpont Morgan, of the banking house of Drexel, Morgan and Co. At that time the name of J. P. Morgan was just beginning to come prominently to the front in banking circles in New York. The Drexels had been conspicuous in business in Philadelphia for many years and in a sense were the fiscal agents of the great Pennsylvania Railroad Company. But the spectacular success of the House of Morgan a few years before in marketing the French government loan in England had added largely to its prestige. And so Vanderbilt concluded that, if any man could show

him a way out in his difficult problem, Pierpont Morgan was that man.

The upshot of the matter was that Morgan devised a plan for the sale of a large amount of Vanderbilt's stock holdings through private sale in England, and in such a way that the knowledge of such sale would not become public in America. A confidential syndicate was formed which undertook to take the stock in a block and pass it on to English investors at approximately its current market price of about $130 per share. The sale was promptly accomplished; the stock went into the hands of unknown interests abroad; Vanderbilt received more than $25,000,000 in cash, which he largely reinvested in United States government bonds, and the Morgan syndicate reaped a profit of about $3,000,000. Five months after the closing of the syndicate public announcement was made of the sale and of the syndicate profit. The striking success of this transaction naturally added greatly to the prestige of J. P. Morgan as a financier of very large caliber, and it had the satisfactory effect of curtailing the legislative attacks on Vanderbilt.

From that date forward, the history of the Vanderbilt railroads has been closely identified with

the House of Morgan. J. P. Morgan and his business associates became the company's financial agents, and thereafter all plans of expansion or consolidation were handled directly by them. In the board of directors Morgan banking interests had full representation, which they have held until this day.

The subsequent history of the Vanderbilt lines is chiefly a story of business expansion and growth. From 1885 to 1893, the great panic year, the New York Central each year added to its mileage, either by merger of smaller lines or by construction. All this time it was consolidating the system, eliminating the weaker links, and strengthening the stronger. Its lines penetrated all the best Eastern railroad territory outside of New England, New Jersey, and Pennsylvania, and no other railroad system in the country, with the single exception of the Pennsylvania, covered anything like the same amount of rich and settled territory, or reached so many cities and towns of importance. New York, Buffalo, Cleveland, Detroit, Chicago, St. Louis, Cincinnati, Indianapolis — these are a few of the great traffic centers which were included in the Vanderbilt preserves. The population of all these cities, as well as that of the hundreds of smaller

places and the countryside in general, was growing by leaps and bounds. Furthermore the Northwest, beyond the Great Lakes and through to the Pacific coast, saw the beginnings of its great development at this time; and the wheat fields of the far western country became a factor of profound importance in the national development. Consequently when the period of depression arrived with the panic of 1893, the Vanderbilt properties were, as a whole, in a strong position to meet the changed situation and, like the great Pennsylvania property, they all passed through to the advent of the new industrial era without the defaulting of a bond or the passing of a dividend. The remarkable character of this achievement is evident in view of the fact that in the period from 1893 to 1898 more than sixty-five per cent of all the railroad mileage in the United States went into the hands of receivers.

After the close of this era of panic, the Vanderbilt lines began expanding again, though on a much smaller scale than in their more active time. In 1898 William K. Vanderbilt, then president, made the announcement that the New York Central had leased the Boston and Albany Railroad, at that time a lucrative line running from Albany across Massachusetts into Boston. This gave the

system an entry into the New England field, which it has continuously held since. A few years later this New England interest was increased by the acquisition of the Rutland Railroad in Vermont, thus making connection with the Ogdensburg and Lake Champlain, a line running across the northern part of New York State, which had also come under Vanderbilt control.

When business revived in the closing years of the nineteenth century, the history of American railroads began a new chapter. Federal railroad regulation, which started in a moderate way with the passage of the Interstate Commerce Act in 1887, had steadily increased through the years; the Sherman Anti-trust Act, passed in 1890, had been interpreted broadly as affecting the railroads of the country as well as the industrial and other combinations. These influences had thus greatly curtailed the consolidation of competing lines which had gone on so rapidly during the decades following the Civil War. Railroad managers and financiers therefore began to face a very serious problem. Competition of a more or less serious nature was still rampant, rates were cut, and traffic was pretty freely diverted by dubious means. Consequently many large railroad systems of heavy capitalization

bid fair to run into difficulties on the first serious falling off in general business.

Great men are usually the products of their times and one of the men developed by these times takes rank with the greatest railroad leaders in history. Edward H. Harriman had risen in ten years from comparative obscurity and was now the president of the Union Pacific Railroad, which he had, in conjunction with the banking house of Kuhn, Loeb and Company, reorganized and taken out of bankruptcy. Harriman was one of the originators of the "community of interest" idea, a device for the partial control of one railroad system by another. For instance, although the law forbade any railroad system from acquiring a complete control of a competing line by purchasing a majority of its capital stock or by leasing it, nothing was said about one railroad having a minority investment interest in another. A minority investment, even though it be as low as ten or twenty per cent, usually constitutes a dominating influence if held by a single interest, for in most cases the majority of the shares will be owned in small blocks by thousands of investors who never combine for a definite, practical purpose. Thus the interest which has the one large block of stock usually controls

the voting power, and runs little risk of losing it unless a contest develops with other powerful interests — and this is a contingency which it almost never has to meet.

Carrying out this policy of promoting harmony among competing lines, the New York Central and Pennsylvania Railroad early in 1900 acquired a working control of the Reading Company, which in turn controlled the New Jersey Central and dominated the anthracite coal traffic. Later the Baltimore and Ohio shared this Reading interest with the Lake Shore of the New York Central system. The New York Central and the Pennsylvania acquired a working control of the same kind in the Chesapeake and Ohio Railway, which was an important element in the soft coal fields and was reaching out to grasp soft coal properties in Ohio and Indiana.

These and other purchases, and the consequent voice acquired in the management, established comparative harmony among Eastern railroads for a long time; they stabilized rates and enabled formerly competing roads to parcel out territory equitably among the different interests. Later, Harriman, and to some extent Morgan, carried the community of interest idea some steps further.

Morgan caused the New York Central to acquire stock interests in certain "feeder" lines such as the New York, New Haven and Hartford and the Chicago, Milwaukee and St. Paul, as well as in competing lines; and Harriman caused the Union Pacific not only to dominate the Southern Pacific Company by minority control but also to acquire interests in the Illinois Central, the Baltimore and Ohio, the New York Central, and other eastern properties. The fact was that Harriman had plans in view for acquiring actual control of the New York Central for the Union Pacific and thus, with the Illinois Central, of creating a continuous transcontinental line from ocean to ocean.

In the past decade few unusual or startling events have marked the history of the Vanderbilt lines. The Vanderbilt family no longer possesses a majority interest in the stock, or anything which approaches it, and the New York Central system and its subsidiaries have come to be known more and more as Morgan properties. The system has grown up with the country. Many of its former controlled roads have now been merged into the main corporation and many new lines have been added to it. Hundreds of millions of dollars of new capital have been spent on the main lines and

terminals since 1900. In 1919 the entire property, including controlled lines, embraced more than 13,000 miles of main track, besides about 5000 miles of extra tracks; over 200,000 freight cars are in use on the system, and every year upwards of 200,000,000 tons of freight are transported. The gross annual revenues of the entire system now aggregate more than $400,000,000, while the total capitalization in stocks and bonds exceeds a billion dollars. It is indeed a far cry from that day in August, 1831, when the *De Witt Clinton* locomotive made its trial trip over the primitive rails of the seventeen-mile Mohawk and Hudson road — a far cry even from that other day, thirty-eight years later, when the sagacious Commodore startled the financial world by his New York Central and Hudson River Railroad, with a capital of ninety million dollars.

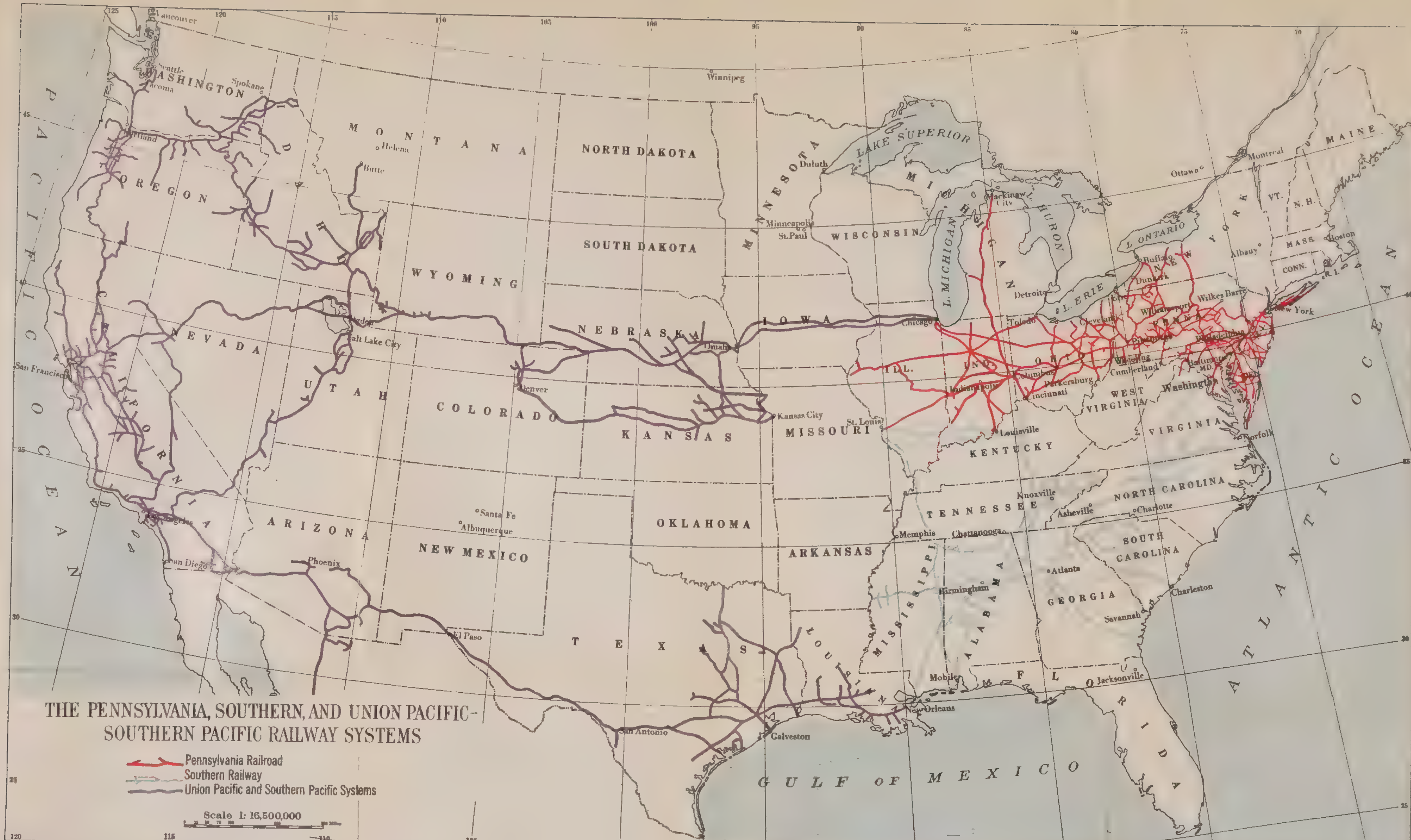
CHAPTER III

THE GREAT PENNSYLVANIA SYSTEM

In the early forties the commercial importance of Philadelphia was menaced from two directions. A steadily increasing volume of trade was passing through the Erie Canal from the Central West to the northern seaboard, while traffic over the new Baltimore and Ohio Railroad promised a great commercial future to the rival city of Baltimore. With commendable enterprise the Baltimore and Ohio Company was even then reaching out for connections with Pittsburgh in the hope of diverting western trade from eastern Pennsylvania. Moreover the financial prestige of Philadelphia had suffered from recent events. The panic of 1837, the contest of the United States Bank with President Jackson, its defeat, and its subsequent failure as a state bank, the consequent distress in local financial circles — all conspired to shift the monetary center of the country to New York.

It was at this time that Philadelphia capitalists began to bestir themselves in an attempt to recover their lost opportunities. Philadelphia must share in this trade with the Central West. The designs of the Baltimore and Ohio Company must be defeated by bringing Pittsburgh into contact with its natural Eastern market. To this end, the Pennsylvania Railroad was incorporated on April 13, 1846, with a franchise permitting the construction of a railroad across the State from Harrisburg to Pittsburgh. An added incentive to constructive expansion was given by an act of the Legislature authorizing the Baltimore and Ohio to extend its line to Pittsburgh if the Pennsylvania Company failed to avail itself of its franchise.

In order to avoid the heavy cost of constructing a road between Philadelphia and Harrisburg, the Pennsylvania Railroad entered into arrangements with the Philadelphia and Columbia — a railroad opened in 1834 and owned by the State — which ran through Chester and Lancaster to Columbia. This road was primitive in the extreme and used both steam and horse power. As late as 1842 a train was started only when sufficient traffic was waiting along the road to warrant the use of the engine. Belated trains were hunted up by



THE PENNSYLVANIA, SOUTHERN, AND UNION PACIFIC-SOUTHERN PACIFIC RAILWAY SYSTEMS

PREPARED FOR THE CHRONICLES OF AMERICA UNDER THE DIRECTION OF W. L. G. JOERG, AMERICAN GEOGRAPHICAL SOCIETY

horsemen. Yet the road was in those days famous for the "rapidity and exceptional comforts of the train service." Between Columbia and Harrisburg passengers westward bound had to use the Pennsylvania Canal.

Construction of the main line westward to Pittsburgh began at once and progressed rapidly. By making use of the Alleghany Portage Railroad from Hollidaysburg, the Pennsylvania Railroad eventually secured a continuous line from Harrisburg to Pittsburgh. But between Philadelphia and Harrisburg passengers were for a long time subjected to many inconveniences. Finally in 1857 the Pennsylvania Railroad bought the Philadelphia and Columbia from the State, rebuilt it, and extended it to Harrisburg. At the same time the Pennsylvania bought the main line of the Public Works, which included the Alleghany Portage Railroad. On July 18, 1858, the first through train passed over the entire line from Philadelphia via Mount Joy to Pittsburgh without transfer of passengers. At the same time the first smoking car ever attached to a passenger train was used, and sleeping cars also soon began to appear.

The railroad genius identified with the history of the Pennsylvania Railroad during the following

decade is J. Edgar Thomson. A man of vision and of great shrewdness and ability, he was more like the modern railroad head of the Ripley or Underwood type than of the Vanderbilt, Garrett, or Drew type. His interest was never in the stock market nor in the speculative side of railroading but was concentrated entirely on the development and operation of the Pennsylvania Railroad system. His dreams were not of millions quickly made nor of railroad dominance simply for the power that it gave; his mind was concentrated on the growth and prosperity of a vast railroad system which would increase with the years, become lucrative in its operations, and not only radiate throughout the State of Pennsylvania but extend far beyond into the growing West.

Under the Thomson management, which lasted until 1874, the record of the Pennsylvania Railroad was one of progress in every sense of the word. While Daniel Drew was lining his pockets with loot from the Erie Railroad and Commodore Vanderbilt was piling up his colossal fortune through consolidation and manipulation, J. Edgar Thomson was steadily building up the greatest business organization on the continent. In 1860, the entire Pennsylvania Railroad system was represented

merely by the main line from Philadelphia to Pittsburgh, with a few short branches. By 1869 the road had expanded within Pennsylvania alone to nearly one thousand miles and also controlled lines northward to the shores of Lake Erie, through the State of New York.

But the master accomplishment of the Thomson administration was the acquisition of the Pittsburgh, Fort Wayne and Chicago line in 1869. This new addition gave the Company its own connection with Chicago and made a continuous system from the banks of the Delaware at Philadelphia to the shores of Lake Michigan, thus rivaling the far-flung Vanderbilt line, a thousand miles long, which the industrious Commodore was now organizing. Shortly thereafter the Pennsylvania began to expand on the east also and obtained an entry into New York City by acquiring the United Railroad and Canal Company, which owned lines across the State of New Jersey, passing through Trenton.

In the latter years of the Thomson management it became more and more evident that it was important for the Pennsylvania Railroad to have further Western connections which would reach the growing cities of the Middle West. While the

Fort Wayne route made a very direct connection with Chicago and included branches of value, yet the keen competition which was developing in the expansive years following the Civil War made actual control of the Middle Western territory a matter of sound business policy. The Vanderbilt lines were reaching out through Ohio, Indiana, and Illinois; the Baltimore and Ohio was steadily developing its Western connections, and now Jay Gould had come actively on the scene with large projects for the Erie. To offset these projects, early in 1870 a "holding company" — probably the first of its kind on record — known as the Pennsylvania Company was formed for the express purpose of controlling and managing, in the interest of the Pennsylvania Railroad, all lines leased or controlled or in the future to be acquired by the Pennsylvania Railroad interests west of Pittsburgh and Erie. This Company took over the lease of the Fort Wayne route and also acquired control by lease of the Erie and Pittsburgh, a road extending northward through Ohio to Lake Erie.

After this date the expansion of the system west of Pittsburgh went on rapidly. In 1871 the Cleveland and Pittsburgh Railroad, which had been

opened as early as 1852, came under the Pennsylvania control. Soon after this, many smaller lines in Ohio were merged in the system. The most important acquisition during this period, however, was the result of the purchase of the great lines extending westward from Pittsburgh to St. Louis, with branches reaching southward to Cincinnati and northward to Chicago. This system — then known as the "Pan Handle" route and later as the Pittsburgh, Cincinnati, Chicago and St. Louis — was a consolidation of several independent properties of importance which had been gradually extending themselves over this territory during the previous decade. This new system, which embraced over fourteen hundred miles of road, gave the Pennsylvania a second line to Chicago, a direct line to St. Louis, a second line to Cincinnati, and access to territory not previously tapped.

While the achievements of the Pennsylvania Railroad Company during these years of consolidation and expansion are not to be compared with those of more modern times, it is well to realize that even as early as the seventh decade of the last century this railroad was always in the forefront in matters of high standards and progressive practice. It was the pioneer in most of the improvements

which were later adopted by other roads. The Pennsylvania was the first American railroad to lay steel rails and the first to lay Bessemer rails; it was the first to put the steel fire-box under the locomotive boiler; it was the first to use the air brake and the block signal system; it was the first to use in its shops the overhead crane.

In these earlier years also the Pennsylvania had established its enviable record for conservative and non-speculative management. No railroad wrecker or stock speculator had ever had anything to do with the financial control of the company, and this tradition has been passed on from decade to decade. The stockholders themselves, even in those days of loose methods and careless finance, had the dominating voice in the affairs of the company and were also factors in the approval or disapproval of any proposed policies. In the matter of its finances the Pennsylvania developed and established an equally clean record. The company began almost at the beginning to pay a satisfactory dividend on its shares and continued to do so right through the Civil War period. Since the through line from Philadelphia to Pittsburgh was opened, not a single year has passed without the payment of a dividend — a sixty-year record

which can be duplicated by no other American railroad system.

The Pennsylvania still continued to forge ahead even during the exciting period from 1877 to about 1889, when the trunk lines were aggressively carrying on that policy of cutthroat competition between Chicago and the Atlantic seaboard which resulted in so severely weakening the credit and position of properties like the Baltimore and Ohio and the Erie. The Pennsylvania, too, indulged in rate cutting, but the management was equal to the situation and made up in other directions what it lost in lower rates. It gave superior service, developed a high efficiency of operation, and steadily maintained its properties at a high standard. During these years the president was George B. Roberts, who had succeeded Thomas A. Scott in 1880.

Roberts's management spanned the period from 1880 to 1897 and embraced a decade of comparative prosperity for the country as a whole and nearly a decade of panic and industrial and financial depression. During the earlier decade the business of the Pennsylvania was continually benefited by the industrial development and growth which marked the period. It was at this time that

the Pittsburgh district took its permanent place as the great center of steel and iron manufacture. The discovery of petroleum in western Pennsylvania, creating an enormous new industry in itself, proved to be an event of far-reaching significance for the Pennsylvania Railroad. The extensive opening up of the soft coal sections of western Pennsylvania, Ohio, and Indiana, also meant much for this great system of railroads.

Still further developments in other directions accrued to the benefit of the Pennsylvania Railroad. In this period, by obtaining the control of a line to Washington, the system acquired a Southern artery running through Wilmington, Delaware, and Baltimore to Washington. Afterwards, with other roads, the Pennsylvania acquired control of the Richmond, Fredericksburg and Potomac Railroad and thus obtained a line to Richmond, Virginia. On the north and to the east the expanding movement also went on. In addition to the development of its main line from Philadelphia to Jersey City, the Pennsylvania acquired many other New Jersey lines, including the West Jersey and Seashore, a road running from Camden to Atlantic City and Cape May.

During the whole of the aggressive administrations

of both Thomas A. Scott and George B. Roberts the great system continued to spread out steadily until it had penetrated as far as Mackinaw City on the north and Chesapeake Bay on the south. Its network of lines stretched across the Eastern section of the continent from New York to Iowa and Missouri, while the intensive development of shorter lines in the State of Pennsylvania and to the north was unceasing. The Northern Central running south from Sodus Bay on Lake Ontario through central Pennsylvania to Baltimore, the Buffalo and Allegheny Valley extending from Oil City northward and joining the main system to the east, the Western New York and Pennsylvania operating north from Oil City to Buffalo and Rochester — these lines the Pennsylvania Railroad acquired and definitely consolidated in the Roberts régime.

After the retirement of Roberts, Frank Thomson, who had formerly been general manager, was placed at the head of the system for three years. But in 1899 Alexander J. Cassatt, who had for many years been identified with the Pennsylvania as officer, director, and stockholder, took the helm, and a new chapter and probably the greatest in the history of this remarkable railroad began.

The name of Alexander J. Cassatt will always

be linked with the comprehensive terminal developments in the region of New York City which were begun almost immediately on his accession to the presidency and which were carried forward on bold and far-reaching lines. Perhaps more than any other one person, Cassatt foresaw the approach of the day when New York City as a commercial center would outstrip both in density of population and in amount of wealth all the other cities of the world. He and his predecessors had for many years witnessed the great industrial development of the Pittsburgh district, where property values had grown by leaps and bounds and where the steadily advancing development of industry and material resources had been so unmistakably reflected in the increasing earning power and value of the Pennsylvania Railroad properties.

But while at Pittsburgh the road had everything to favor it as far as terminals and rights of way through the heart of the great industrial district were concerned, in the great Eastern metropolis the Pennsylvania Railroad was at an obvious disadvantage, particularly as compared with the New York Central, which had its splendid terminal rights penetrating to the heart of the city. Cassatt saw that his company must without delay

take a number of bold and, for the time, enormously expensive steps toward the development of terminal facilities in Greater New York or else forever abandon the idea of getting nearer the heart of the city than the New Jersey shore and thus run the risk, in the keen contest for commercial supremacy, of ultimately falling behind other more advantageously situated lines.

There were still further incentives to immediate action on the part of the Pennsylvania Railroad. While the New York Central was in an ideal position for handling all traffic destined for the New England States, the Pennsylvania could control practically none of this business, as its terminals were on the wrong side of the Hudson and necessitated not merely the inconvenient transfer of passengers but also the much more expensive handling of freight. Other disadvantages from which the Pennsylvania suffered were involved in its inability to make the most economical terms for foreign shipping, as a large proportion of such freight had to be constantly transferred on lighters to the New York and Brooklyn sides of the harbor. Thus any comprehensive plan for terminal development on the part of the Pennsylvania must necessarily include not only a tunnel system into

New York City but also an outlet through the city to Long Island and a connection with the New England railroads.

The first move in the development of this terminal system was the acquisition in 1900 of the control of the Long Island Railroad, embracing all the steam railway mileage on Long Island, with lines extending along both the north and south shores to Montauk Point. This acquisition added extensive freight yards and terminals on the Brooklyn side of the East River. The Company then obtained franchises and began the construction of its great tunnels under the North and East Rivers and entirely across New York City, with a mammoth passenger station at Seventh Avenue and Thirty-second Street. A great railroad bridge was planned to cross from Long Island to the mainland, connecting with the New York, New Haven and Hartford system, in the stock of which the Pennsylvania at this time purchased an interest.

The terminal construction occupied a period of many years and cost over one hundred million dollars, besides the added costs involved in building up and developing the old, worn-out Long Island Railroad. Only recently has the project

been rounded out and completed through the final construction of the important connection with the New England railroad systems. But the realization of this plan is undoubtedly the greatest achievement in all the long career of the Pennsylvania Railroad. Had the project been delayed for another decade, it probably could not have been accomplished because of the growing expense of operation and the difficulties of getting franchise rights and rights of way through and under the metropolis.

While the tunnel development is the notable achievement of the Cassatt régime, this remarkable man's name is also closely identified with the "community of interest" idea already explained. This "community of interest" scheme was pushed aggressively by Cassatt in coöperation with Harriman, Hill, and Morgan. Large stock purchases were made in the Norfolk and Western, the Chesapeake and Ohio, and the Baltimore and Ohio. As the latter road had in its turn acquired, jointly with New York Central interests, a working control of the Reading Company, and the Reading Company had secured majority ownership of the New Jersey Central system, it is apparent that the domination which the Pennsylvania had obtained over the

entire Eastern seaboard south of New York City and north of Baltimore was made nearly complete.

The "community of interest" plan held sway with the large railroads of the country and was very effective for perhaps half a dozen years, until the interstate commerce laws were amended in such a way as to give the Government complete control over railroad freight and passenger rates. In 1906 the Pennsylvania began to dispose of the bulk of its holdings in competing properties, the most notable transactions being the sale of its entire interest in the Chesapeake and Ohio to independent interests and a substantial part of its Baltimore and Ohio holdings to the Union Pacific Railroad. A few years later, when the Union Pacific was forced by the Federal courts to dispose of its control of the Southern Pacific Company, a trade was made between the Pennsylvania and the Union Pacific whereby the latter took from the Pennsylvania the remainder of its Baltimore and Ohio investment and gave in exchange a portion of its own large holding of Southern Pacific stock.

To get a fair idea of the meaning and magnitude of the great Pennsylvania Railroad system today one must do more than scan maps and study statistics. One should travel by daylight over its

main line from New York to Pittsburgh. Although the route is over the same ground which the road followed a generation or two ago, a four-track line runs practically all the way, with long stretches of hundreds of miles of five, six, and eight tracks. Where mountains were climbed thirty years ago, one will now find them bored by tunnels; where sharp curves were necessary before straight trackage only will be encountered today. Grades have been eliminated everywhere and the whole route has been modernized and strengthened by the laying of one hundred to one hundred and fifty pound rails.

Undoubtedly the fortunate location of the Pennsylvania lines in the half dozen States which represent the financial and industrial heart of the continent has had much to do with its vast growth and the expansion of its business; but its high reputation can be explained only by the long record of its superior methods and management. One of the primary objects of Pennsylvania Railroad policy has been to keep pace with the growth of the country. Instead of following in the wake of industrial progress and making its improvements and extensions after its competitors had made theirs, its management has usually had the foresight to prepare well in advance for future needs.

CHAPTER IV

THE ERIE RAILROAD

Before introducing a friend to a distinguished stranger, it is advisable to give him some account of the person whose acquaintance he is about to make; and so, fellow-traveler, whom I introduce to the New York and Erie Railroad, it may be well to prefix here a brief sketch of the history and present condition of this, the Lion of Railways. True, he is yet in an unfinished state, but you will find that what there is of him is complete, and of wondrous organization and activity. His magnificent head and front repose in grandeur on the shores of the Hudson; his iron lungs puff vigorously among the Highland fastnesses of Rockland; his capacious maw fares sumptuously on the dairies of Orange and the game and cattle of Broome; his lumbar region is built upon the timber of Chemung, and the tuft of his royal extremity floats triumphantly on the waters of Lake Erie.

This exultant, characteristically American, description appeared in Harper's *Guide-Book of the New York and Erie Railroad*, published in 1851, soon after the opening of the main line of more than

four hundred and sixty miles from Piermont on the Hudson to Dunkirk on Lake Erie. That this railroad, which after nearly twenty years of struggle and of financial vicissitudes had finally linked the Great Lakes with the Atlantic coast, was looked upon as a property of wonderful character and limitless future is indicated in all the railroad literature of that time. Appleton's *Illustrated Handbook of American Travel*, published in 1857, devotes several pages to a description of this remarkable achievement in railroad extension and among other things says:

This great route claims a special admiration for the grandeur of the enterprise which conceived and executed it, for the vast contribution it has made to the facilities of travel, and for the multiplied and various landscape beauties which it has made so readily and pleasantly accessible. It traverses the southern portion of the Empire State in its entire length from east to west, passing through countless towns and villages, over many rivers, through rugged mountain passes now, and anon amidst broad and fertile valleys and plains. In addition it has many branches, connecting its stations with other routes in all directions, and opening new stores of pictorial pleasures. . . . An interesting feature of this road is its own telegraph, which runs by the side of the road and has its operator in nearly every station house. This telegraph has a double wire, enabling the company to transact the public, as well as their

own private business. Daily trains leave for the west on this route, with connections by boat from the foot of Duane Street, morning, noon, and night.

The Erie Railroad system was foreshadowed in the time of Queen Anne, when the Colony of New York appropriated the sum of five hundred dollars to John Smith and other persons for the purpose of constructing a public road connecting the port of New York with the West in the vicinity of the Great Lakes. The appropriation was coupled with the condition that within two years the beneficiaries should have constructed a road wide enough for two carriages to pass, from Nyack on the Hudson River to Sterling Iron Works, a distance of about thirty miles; and that they should cut away the limbs of trees over the track in order to allow the carriages to pass. In this way began the internal improvement system of the State of New York, which after the lapse of more than a century resulted in opening the Erie Canal and in projecting a railroad system connecting New York and the valley of the Hudson with Lake Erie.

After the opening of the Erie Canal in 1825, the Legislature of New York directed a survey of a state road which was to be constructed at public expense through the southern tier of counties from

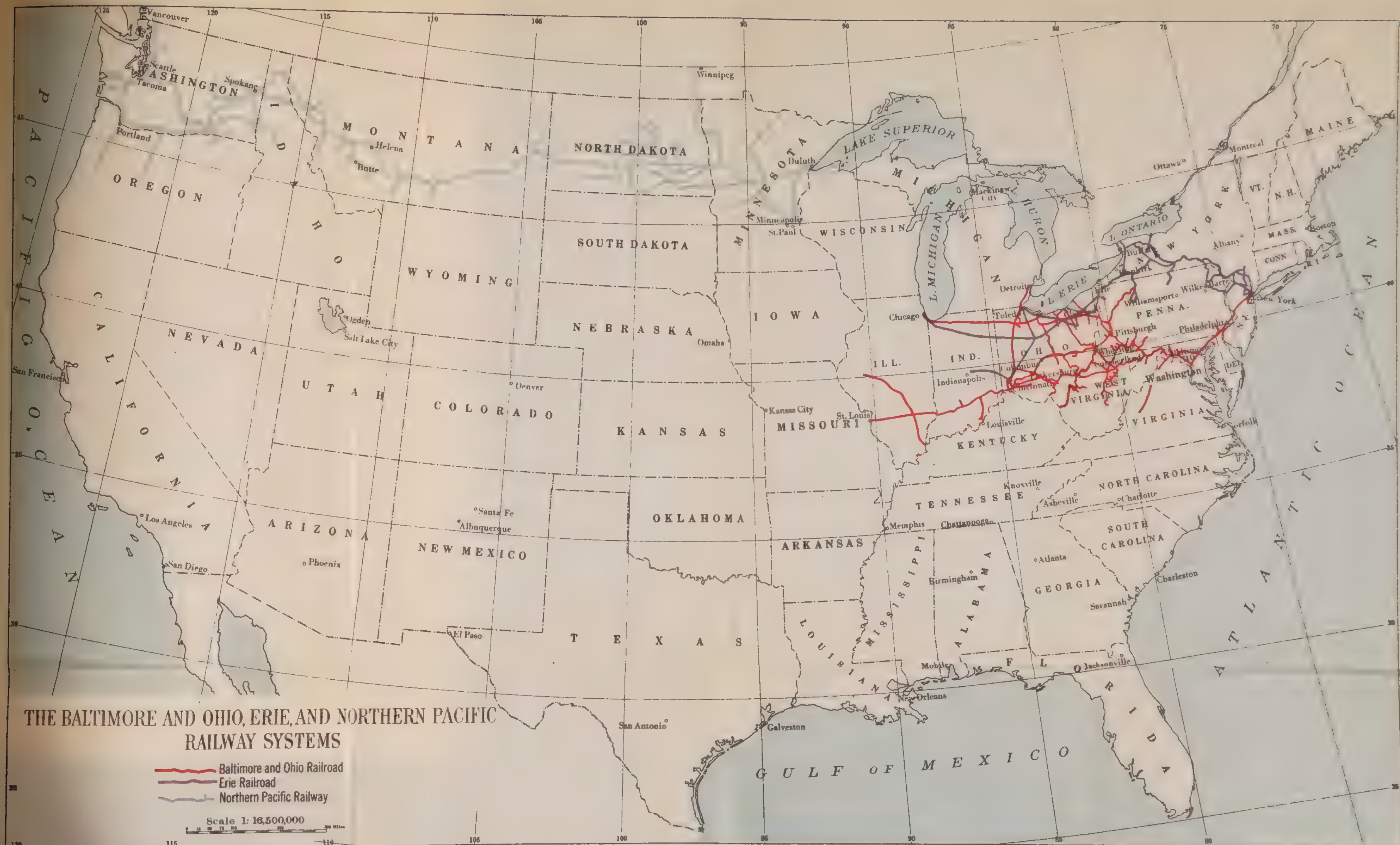
the Hudson River to Lake Erie. The unfavorable profile exhibited in the survey apparently caused the project to be abandoned. But the idea still held sway over the minds of many people; and the great benefits brought to the Mohawk Valley and surrounding country by the Erie Canal led the southern counties to demand a transportation route which would work similar wonders in that region. This growing sentiment finally persuaded the Legislature to charter in April, 1832, the New York and Erie Railroad Company, and to give it authority to construct a line and to regulate its own charges for transportation.

During the following summer a survey of the route was made by Colonel De Witt Clinton, Jr., and in 1834 a second survey was made of the whole of the proposed route. When the probable cost was estimated, many opponents arose who declaimed the undertaking was "chimerical, impractical, and useless." The road, they declared, could never be built and, if built, would never be used; the southern counties were mountainous, sterile, and worthless, and afforded no products requiring a market; and, in any case, these counties should find their natural outlet in the valley of the Mohawk. This antagonism was successfully opposed,

however, and the construction of the road was begun in 1836.

The panic of 1837 interfered with the work, but in 1838 the state Legislature came forward with a construction loan of three million dollars, and the first section of line, extending from Piermont on the Hudson to Goshen, was put into operation in September, 1841. In the following year the company became financially embarrassed and was placed in the hands of receivers. This catastrophe delayed further progress for years, and it was not until 1846 that sufficient new capital was raised to go on with the work. The original estimate of the cost for building the entire line of 485 miles had been three million dollars, but already the road had cost over six millions and only a small portion had been finished. The final estimate now rose to fifteen millions, and, although some money was raised from time to time and new sections were built, there was no certainty that the entire road would ever be completed. Ultimately the State of New York canceled its claim against the property, new subscriptions of some millions were secured, and more money was raised by mortgaging the finished sections.

Finally, in 1851, after eighteen years of effort,



THE BALTIMORE AND OHIO, ERIE, AND NORTHERN PACIFIC RAILWAY SYSTEMS

PREPARED FOR THE CHRONICLES OF AMERICA UNDER THE DIRECTION OF W. L. G. JOERG, AMERICAN GEOGRAPHICAL SOCIETY

JULIUS BIEN LITH N.Y.

the line was opened to Lake Erie. In addition there had been added various feeders or branches, giving the road an entry into Scranton, Pennsylvania, and into Geneva and Buffalo, New York. It had its terminus on Lake Erie at Dunkirk and its eastern terminus at Piermont, near Nyack on the Hudson, about twenty-five miles by boat from New York City.

The financial condition of the Erie at this time manifested the beginning of that general policy of improvidence and recklessness which afterward, for nearly a generation and a half, made the company a speculative football in some of the most disreputable games of Wall Street stock-jobbers. For though the original estimate had been three millions and the highest estimate of the cost during construction had been fifteen million dollars, the company, in 1851, started its career with capital obligations of no less than twenty-six millions — a very large sum for those days.

The fact that these initial obligations constituted a heavy burden became apparent when the Erie began operations. They made necessary such high freight rates that shippers held indignation meetings and again and again made appeals for legislative relief. Although much money had been

raised after 1849 for improvements, the condition of the Erie steadily grew worse. It soon became notorious for many accidents due to carelessness in running trains and to the breaking of the brittle iron rails.

But in spite of these drawbacks the business of the Erie grew. In 1852 it acquired the Ramapo and Paterson and the Paterson and Hudson River railroads and in this way it obtained a more direct connection with New York City. It changed the tracks of its new railroads to the six-foot gage, which the Erie had adopted from the start and which it persisted in maintaining for many years despite the world-wide practice of establishing a standard width of four feet eight and one-half inches.

The most conspicuous figure in the history of the Erie Railroad system in these early days was Daniel Drew. From 1851, when the main line was opened, until 1868, this man was a director and, for the larger part of the time, treasurer. Born in 1797, he had driven cattle when a boy from his native town of Carmel in Putnam County to the New York City market and, for some years later, he had been proprietor of the Bull's Head Tavern. Shrewd, unscrupulous, illiterate, good-natured, and

sometimes generous, he was in many ways unlike his great adversary in the railroad world, Commodore Vanderbilt. Drew affected a pious and sanctimonious attitude in all his dealings, while Vanderbilt had a more frank and open nature and usually made no pretensions to righteousness.

For many years following 1851, Drew, who owned or controlled nearly one-half the stock of the Erie, appeared to think that his office of treasurer carried with it the right to manipulate the stock of the road at any time it might help his pocketbook to do so. He frequently advanced money which the road could not obtain elsewhere, always taking full security and excessive commissions. This practice gave him the name of "speculative director," and by the time his great contests with Commodore Vanderbilt broke out, he was reputed to be worth many millions, most of which he had acquired by juggling in Wall Street with Erie securities.

The entire period in the affairs of the Erie system from the ascendency of Daniel Drew in 1851 to the end of the Civil War witnessed an endless succession of stock-market exploits both large and small. In the spring of 1866, however, Drew found an opportunity to achieve a real masterpiece in

manipulation. The stock of the Erie road was then selling at about 95 and the company was in pressing need of funds. The treasurer came to the rescue as usual and made the necessary advances on adequate security. The company had in its treasury a considerable amount of unissued stock and had also the legal right to issue bonds to the extent of $3,000,000 which could be converted into stock. Drew took these bonds and the unissued stock as security for a loan of $3,500,000.

It so happened, naturally, that Drew was soon heavily short of Erie stock in Wall Street. The market was buoyant; speculation was rampant; and the outside public, the delight and prey of Wall Street gamblers, were as usual drawn in by the fascination of acquiring wealth without labor. All this time our friend, Daniel Drew, was quietly selling Erie stock and closing contracts for the future delivery of the certificates; and he was doing this at rising prices. As the days went by, his grave, desponding manner grew more and more apparent. Erie stock continued to rise. In the loan market its scarcity became greater hour by hour. The rumor began to spread that "Uncle Daniel" was cornered. His large obligations for future delivery must be met. Where was the Erie

stock to come from? The stock continued to soar, and Treasurer Drew seemed to become more and more depressed.

Then the blow fell. Drew laid his hands on the collateral which he held for his loan to the Erie. In the twinkling of an eye his $3,000,000 in Erie bonds was converted into Erie stock, which he proceeded to dump in Wall Street. Erie quotations fell from 90 to 50. Every one at last realized the trap — but not before Daniel Drew had pocketed a few millions in profits.

By this time Drew had come to be looked upon as a stock operator to be both admired and feared, and this incident took its place in Wall Street history as a brilliant coup side by side with Vanderbilt's Harlem Railroad and other celebrated exploits. It was soon followed, however, by much more sensational events. We have seen that the portentous figure of Vanderbilt was just at this time looming up in the railroad world, and Vanderbilt had his own theory of the management and financing of railroads. It was inevitable that he should clash with Drew. He was a few years older than Drew, and the two men, as we have seen, had much in common. Both were well on in life before they had transferred their activities to

steam railroads. When finally, in 1868, they crossed swords in connection with the two railroad systems extending through New York State, both were more than seventy years old and had been successful in the acquisition of millions by methods of their own invention. They were no doubt equally unscrupulous, but, while Drew was by nature a pessimist and "bearish," Vanderbilt, in the Wall Street vernacular, was always a "bull."

Having obtained control of the New York Central, the Hudson River, and the Harlem railroads, Commodore Vanderbilt now decided in the summer of 1867 to go after the Erie, of which Drew was nominally in possession, although no one knew when he owned a majority of the stock or when he was temporarily short of it. Usually he loaded up as the annual election of officers approached and liquidated shortly thereafter. Besides Vanderbilt there was another interest at this time trying for the control of the Erie. This interest consisted of certain Wall Street speculators and certain Boston capitalists who proclaimed themselves railroad reformers. These so-called reformers were as unscrupulous and crafty as either of the other men, and they really represented nothing but an attempt to raid the Erie treasury in the interest

of a bankrupt New England corporation known as the Boston, Hartford and Erie Railroad. As was well said, the name of this latter road was "synonymous with bankruptcy, litigation, fraud, and failure."

The Erie Railroad control was always nominally for sale, and, as the annual election approached, a majority of stockholders stood ready to sell their votes to the highest bidder. Commodore Vanderbilt cleverly secured the coöperation of the "reformer" element, corralling their proxies, and thus he appeared to be in a position to oust the Drew interests without difficulty. On the Sunday preceding the election the Commodore saw Drew and amicably explained to him the trap he had laid, and showed him clearly that there was no way out of the situation. Upon this disclosure, Treasurer Drew at once faced about and agreed to join hands with Vanderbilt in giving the market for the stock the strong upward twist it had lacked before that hour. Jointly they would make so much money that neither side would lose anything. "Uncle Daniel" went away apparently satisfied and contented with the compromise.

But the Commodore had not finished. A few hours later he took the Boston adventurers into his confidence and explained that he proposed to

continue Drew in the directorate. The Boston men were puzzled and confused by this sudden change of front. Later, all parties met at Drew's house, and Vanderbilt brought the Boston men to terms by proposing a plan to Drew whereby they would be entirely left out. This ruse succeeded and a written agreement to the advantage of all, but at the expense of the outside stockholders and of the general public, was then drawn up.

This, however, was only the beginning of the fight. Vanderbilt was now in the Erie as a joint owner, but he had stretched out his hands to control the road and he meant to succeed. In February of 1868, Frank Work, the single representative of Vanderbilt on the Erie board, applied for an injunction against Treasurer Drew and his brother directors to restrain them from the repayment of the $3,500,000 borrowed by the railroad from Drew in 1866, and to restrain Drew from taking any legal steps toward compelling a settlement. Judge Barnard granted a temporary injunction, and two days later Vanderbilt's attorney petitioned for the removal from office of Treasurer Drew. The papers presented in the case exposed a new fountain of Erie stock which had up to that time been entirely overlooked.

A recently enacted law of the State of New York — probably fathered by Drew — authorized any railroad company to create and issue its own stock in exchange for the stock of any other railroad under lease to it. Upon the basis of this law Drew and his close satellites had secretly secured ownership of a worthless piece of road connecting with the Erie and known as the Buffalo, Bradford and Pittsburgh. Then, as their personal needs in the stock-market or at elections demanded, they had supplied themselves with new Erie stock by leasing the worthless road to the Erie and then exchanging Erie stock for the worthless stock of the leased line. The cost of the line to Drew and his friends, as financiers, was about $250,000. They then issued, as proprietors, $2,000,000 in bonds of the road, payable to one of themselves as trustee. This person then shifted his character, became counsel for both sides, and drew up a contract leasing the line to the Erie for 499 years, the Erie agreeing to guarantee the bonds in consideration. These men then reappeared as directors of the Erie and ratified the lease. After that it was a simple matter to divide the loot. The Erie was thus saddled with a $2,000,000 mortgage at seven per cent in addition to a further issue of capital stock.

Following the first injunction another was now issued restraining Drew and the Erie board from making any further issues of stock, by conversion of bonds or otherwise, and also forbidding the Erie to guarantee any further issues of bonds. An additional injunction forbade Drew from having any transactions in Erie stock or fulfilling any contracts until he had returned to the treasury the shares involved in his loan transaction of 1866 and in the purchase of the worthless Buffalo, Bradford and Pittsburgh road.

Matters now looked forbidding for Treasurer Drew. Instead of being allowed to manufacture fresh Erie stock certificates at his own will, as had been his habit for fifteen years, he was to be cornered by a legal writ and forced to work his own ruin. But notwithstanding the apparently desperate situation it was quite evident that Drew's nerves were not seriously affected. Although he seemed rushing on destruction, he continued day after day to put out more short stock, all in the face of a steadily rising market. His plans, apparently, were carefully matured, and he said that if the Commodore wanted the stock of his road he would let him have all he desired — at the proper price.

As usual the Erie treasury was short of funds, and as usual "Uncle Daniel" stood ready to advance all the money required — that is, on proper security. There was but one kind of security to offer and that was convertible bonds. No stock could be issued by the company for less than par, but convertible bonds could be disposed of by the directors at any price. A secret meeting of the executive committee was held, at which it was voted to issue immediately and to offer for sale $10,000,000 in convertible bonds at 72½. Drew's broker at once became the purchaser of $5,000,000 worth. In ten minutes after the meeting had adjourned, the bonds had been issued, their conversion into stock demanded and made, and certificates for 50,000 shares of stock deposited in a broker's safe, subject to Drew's order.

A few days later came the injunction, and Erie stock began to soar in the markets, in response to which "Uncle Daniel," who had been industriously selling his many thousands of new shares, now determined to bring up the reserves and let the eager buyers have the other five millions; but before the bonds could be converted the injunction had been served. The date for the return of the writ was Tuesday the 10th of March; but the Erie

ring needed less time than this and decided on Monday the 9th as the day to defeat the corner.

Saturday and Sunday were busy days for Drew and his friends. All his brokers had been enjoined, so a dummy was made the nominal purchaser of the bonds. This dummy then made his formal demand for the conversion of the bonds and was refused. All this was done upon affidavit, as it was the plan of Drew to get from some judge a writ of mandamus to compel the Erie Railroad to convert the bonds. The stock certificates for which they were to be exchanged were signed in blank and made ready for delivery.

Drew had agreed to sell 50,000 shares of stock at 80 to the firms of which Jay Gould and James Fisk, Jr., were members; they were also Erie directors. On Monday morning, the 9th of March, the certificates, filled out in the names of these firms, were handed by the secretary to an employee who was directed to carry them from the office of the company in West Street to the transfer clerk in Pine Street. The messenger left, but in a moment or two returned to report to the apparently amazed secretary that Fisk had met him outside the door, had taken the certificates away from him, and "had run away with them." It was true. The stock

certificates had been "stolen" and were beyond the control of an injunction. The stock certificates next appeared in every part of Wall Street.

On the same day the Erie representatives applied to Judge Gilbert of Brooklyn for an injunction on the ground that certain persons, including Judge Barnard, had entered into a conspiracy to speculate in Erie stock and to use the process of the courts to aid the speculation. To the amazement of everybody, Judge Gilbert issued an injunction restraining all parties to all the other suits from further proceedings; in one paragraph ordering the Erie directors to continue in the discharge of their duties — in direct defiance of the injunction of one judge — and in the next paragraph forbidding the directors to desist in the conversion of bonds — in direct defiance of another judge. The Drew interests were now enjoined in every direction. One judge had forbidden them to move, and another judge had ordered them not to stand still.

It was a strategic position which Drew and his agents could not have improved upon, and while matters stood this way the 50,000 shares of Erie stock had been flung on the market. Vanderbilt, who was ignorant of this situation, bought the new stock as eagerly as the old. Then, when the

facts came out, the quotations dropped with a thud. Uncle Daniel was victorious; the attempted corner had been a failure; and the Commodore was holding the bag.

Further dramatic events followed. The Erie directors learned that process for contempt had been issued and that their only chance of escape from jail lay in immediate flight. So, stuffing all that was worth while of the Erie Railroad into their pockets, they made off under cover of darkness to Jersey City. One man carried with him in a hackney coach over $6,000,000 in greenbacks. Two of the directors lingered and were arrested; but a majority collected at the Erie station in Jersey City and there, free from interference, went on with the transaction of business. Without disturbance they were able to count their expenses and divide the profits.

Vanderbilt was now loaded up with reams of Erie stock at high costs, and the load was a severe strain on him. He dared not sell for fear of causing a financial collapse. Drew had taken away about seven million dollars of his money and an artificial stringency had been created in Wall Street by this exodus of most of its available cash. But Vanderbilt weathered the storm and, as his generally

optimistic attitude inspired confidence, the sky began to clear.

But this stock-market battle did not end the war. New injunctions flew in all directions. Osgood, son-in-law of Vanderbilt, was appointed receiver of the 100,000 shares of illegally issued stock and was immediately enjoined from acting by another judge. Then Peter B. Sweeney, of the Tammany ring, was appointed in his stead without notice to the other side. There was nothing for a receiver to do, as every dollar he was to "receive" was known to be in New Jersey and beyond his reach. Nevertheless he was subsequently allowed a fee of $150,000 by Judge Barnard for his services!

While the legal battle was going on neither Drew nor Vanderbilt was idle. A plot was arranged for bringing the Erie directors over by force, but this failed. In the meanwhile the Erie directors persuaded the New Jersey Legislature to rush through a bill making the Erie Railway a New Jersey corporation. This move, however, was intended merely to meet an emergency. It was the intention of the Erie interests to do their real work with the Legislature at Albany. This was also the intention of the Vanderbilt interests. Consequently, during the subsequent session, the grafters in that body were

wooed by both sides. When the Legislature convened, a bill was promptly introduced making legal the recent issue of Erie stock, regulating the power to issue convertible bonds, providing for the guaranty of the bonds of the Boston, Hartford and Erie, and forbidding the consolidation of the Central and the Erie under the control of Cornelius Vanderbilt. But evidently the Commodore's purse was open wider than "Uncle Daniel's," for this bill was defeated by a decisive vote.

Now Jay Gould appeared upon the scene. He left Jersey City with half a million of the Erie's money in his pocket and arrived in Albany immediately after the defeat of this bill. On his arrival he was arrested on a writ issued against him for contempt of court and was held in bail of half a million dollars for his appearance in New York a few days later. He appeared before Judge Barnard in New York and was put in the charge of a sheriff. But the sheriff was served with a writ of *habeas corpus*, and Gould was again brought before the court. Then in some mysterious way the hearing was deferred and Gould returned to Albany, taking the officer as a traveling companion.

After reaching his destination Gould became so ill that he could not return to New York, though

he managed to go to the Capitol in a driving snowstorm. Here he became rapidly convalescent, as did also many members of the Legislature. Members, indeed, who had been too sick or too feeble to attend the legislative sessions during this cold winter suddenly found their health returning and flocked to Albany on the fastest trains. Gould stayed in Albany until April, and by this time a remarkable change had come over the mentality of a majority of the legislators. On the 13th of April a bill was presented in the Senate which met the approval of the Erie interests and which Judge Barnard afterwards designated as a bill for legalizing counterfeit money. This bill, which was passed after due debate, legalized the issues of Erie bonds and stocks which had been put out by Drew; it provided for the guaranty of the bonds of connecting roads as desired by Drew; and it forbade all possible contracts for consolidation or division of receipts between the Erie and the Vanderbilt roads, a provision also desired by Drew. In fact it was the same bill in different form that had been voted down so decisively a short time before.

But the real tug of war was to get the bill through the lower House. Fabulous stories were told of money which would be expended and the

market quotations for votes never soared so high. Then, at the critical moment, Vanderbilt surrendered, made a secret deal with his foe, and withdrew his opposition to the bill. The anger of the disappointed grafters and vote-sellers knew no bounds, and they immediately set to work passing other bills which they felt would annoy or injure Vanderbilt, with the hope that he would still be induced to give them what they regarded as their rightful spoils.

The details of this settlement between Drew and Vanderbilt were not announced until some months afterward. By the terms agreed on Vanderbilt was relieved of 50,000 shares of Erie stock at 70, payable partly in cash and partly in bonds guaranteed by the Erie, and received $1,000,000 in cash for an option given the Erie Railroad to purchase his remaining 50,000 shares at 70 within four months, besides about $430,000 to compensate his friends who had worked so heroically for him. This total sum of nearly $5,000,000 no doubt represented part of the "slush fund" which Drew expected that the company would have to give up to the venal legislators, and it was therefore no hardship to hand it over to Vanderbilt instead.

As a part of the general settlement the Boston

interests were relieved of their $5,000,000 of largely worthless bonds of the Boston, Hartford and Erie Railroad, for which they received $4,000,000 of Erie securities. Thus in all about $9,000,000 in cash or securities was drawn out of the Erie treasury in final settlement of this great stock-market manipulation. And this does not include the pickings of Gould and Fisk and the smaller fry, of which there is no official record. But that these gentlemen did not go empty-handed there is not the shadow of a doubt!

The sensational stock-market deal between the Drew and Vanderbilt interests was but a truce, however, and did not settle the troubles of the Erie. Jay Gould was now becoming a dominating factor and in October of 1868 was chosen president. The various stock-market struggles that ensued from the ascendency of Jay Gould to the receivership of the Erie in 1875 is a long and intricate tale. Suffice it to say that the events were generally similar to those already recounted — stock-market corners, over-issues of bonds and stocks, injunctions, court orders, arrests, legislative bribes. Less than a week after his election Jay Gould frankly announced that the company had just issued

$10,000,000 of convertible bonds and that a third of these had already been converted into stock. He further announced that the company now had $60,000,000 of common stock outstanding, whereas the public had understood that it was only $45,000,000.

During the few years that followed, the poor Erie was systematically looted. Millions were wasted in New York real-estate speculation, and the company's money was used in the erection of the Grand Opera House on Twenty-third Street, to which the executive offices of the Erie Railroad were moved. Finally the new ring, comprising as leading spirits Jay Gould and James Fisk, Jr., eliminated Daniel Drew and left him high and dry without a cent, through a new stock corner. About this time the road was financially on its last legs, and Jay Gould was appointed receiver. This started further litigation which dragged on for several years until, in 1874, Gould was turned out by General Daniel E. Sickles in combination with the English shareholders. The new interests, when they finally got control, elected an entirely new management and made H. J. Jewett, a practical railroad man, president. But the Erie was already bankrupt, and not much could be done toward

saving the situation. In May, 1875, the road confessed inability to meet its obligations, and Jewett was appointed receiver.

It was three years from the date of the receivership before the Erie property was taken out of the hands of the courts. In April, 1878, a new company, the New York, Lake Erie and Western Railroad, took over the property; Jewett was elected its president, and a new chapter in the history of the property began.

Had the reorganization of the Erie been drastic enough, the road might not so soon have fallen into financial difficulties again, for it owned valuable coal lands in Eastern Pennsylvania and rapidly increased its earnings in this region. Moreover the extension of the system westward should have increased its earning capacity. Up to this time the Erie had no Chicago connection and was at an obvious disadvantage compared with its competitors. It improved this situation in 1881 by acquiring the New York, Pennsylvania and Ohio, and the franchise of the Chicago and Atlantic Railway. Two years later it obtained control of the Cincinnati, Hamilton and Dayton and found itself in a position in which it could compete for through traffic with the Pennsylvania and the New York Central.

But in carrying through these extensive plans, the Erie again became involved in financial difficulties; the sensational Grant and Ward failure in Wall Street in 1884 was a severe blow to the company's credit, as this firm was at that time doing important financing for the Erie. The English security holders stepped to the front again, d[illegible]manded President Jewett's resignation, and elec[illegible]e John King in his stead.

In 1885 and 1886 a financial readjustment took place, but the company continued to carry the bulk of the heavy load of obligations which had been created during the years of the Drew and Gould managements. It was surely an evidence of the inherent worth of the property that during the half dozen or more years following, the Erie succeeded in struggling along in the face of all its financial and other handicaps and at the same time showed substantial growth in the volume of its business. The company was kept above water until 1893 without again appealing to the courts; but by that time the indebtedness had once more mounted, and in July of that year Erie receivers were appointed for the fourth time in its history.

The name of Pierpont Morgan is closely identified with the story of the railroad during this latest

Los Angeles by leasing the Southern Pacific tracks from Colton.

The Santa Fé had now reached the Pacific coast over its own lines, but it was handicapped by poor connections with the East. Its next move therefore was eastward to Chicago, where it acquired the Chicago and St. Louis Railroad between Chicago and Streator, Illinois, and then constructed lines between the latter point and the Missouri River. During the same year the company opened branches southward to the Gulf of Mexico, until by May, 1888, the entire system comprised 7100 miles.

This rapid expansion of the property, combined with extravagance in management and a reckless policy in the payment of dividends, brought the company into financial difficulties within a year after the completion of the system. Unprofitable branches had been built, and these had become an immediate burden to the main system. It is the same story that has been told of most of the large railroads of those days. Strenuous efforts were made to save the property from a receivership, and a committee was appointed in September, 1889, to devise ways and means of reform and reorganization.

The new management of the Santa Fé was a rational one and substantially reduced the obligations of the road. Had its spirit been maintained, a second failure and reorganization a few years later would not have been necessary. New interests, however, came into the property, and, though it was hoped that they would support a conservative policy, the former programme of expansion was resumed until in 1890 the St. Louis and San Francisco system was merged with the Santa Fé on a very extravagant basis. Within a year it was clear that the St. Louis and San Francisco would prove more of a liability than an asset. During the same time the less important purchase of the Colorado Midland Railway also turned out to be a poor investment.

The next four years were marked by more bad financial management which culminated in the failure of the reorganized company. In 1892 an exchange of income bonds for fixed interest-bearing bonds so increased the fixed charges of the company that, as a result of the panic of 1893 and its ensuing depression, the great Santa Fé system suddenly found itself in the hands of a receiver. The president, John W. Reinhart, had persistently asserted throughout 1893 that the company was

financially sound; but an examination of its books subsequently made in the interest of the security holders disclosed gross irregularities, dishonest management, and manipulation of the accounts.

During the year 1894 the property was operated under the protection of the courts, and early in 1895 a new and comprehensive scheme of reorganization was carried out. This latest plan involved dropping the St. Louis and San Francisco system, the Colorado Midland, and all other unprofitable branches; it wiped out the floating debt; it supplied millions of new capital; and it enabled the succeeding management at once to build up and improve the property.

At the head of the new company was placed Edward P. Ripley — a railroad manager of great executive ability and a practical, broad-minded business man of the modern type, who has ever since remained president of the road. The history of the Santa Fé since 1895 has been closely identified with Ripley's business career, and its record during these two decades has been an enviable one. Steady progress from year to year in volume of business, in general development of the system, in improvement of its rights of way, terminals, and equipment, has characterized its history

through periods of depression as well as times of prosperity. Its resources have grown to vast totals; its credit equals that of the best of American railroads; its stocks and bonds are prime investments; and each year it pours millions of dollars of profits into the hands of its stockholders.

CHAPTER IX

THE GROWTH OF THE HILL LINES

The States which form the northern border of the United States westward from the Great Lakes to the Pacific coast include an area several times larger than France and could contain ten Englands and still have room to spare. The distance from the head of the Great Lakes at Duluth to the Pacific coast in the State of Washington is greater than the distance from London to Petrograd or the distance from Paris to Constantinople, and three times the distance from Washington, D. C., to Chicago.

Fifty years ago these States, with the single exception of Wisconsin, were practically a wilderness in which only the Indian and buffalo gave evidences of life and activity. No railroads penetrated the forests or the mountain ranges. Far southward some progress in the march of civilization had been made; the Union Pacific had linked

the West with the East before the eighth decade of the century began, and the Northern Pacific project was being painfully pushed through the intermediate tier of States during the seventies. But the material resources of the Great Northwest had still to be discovered.

When the Northern Pacific Railway failed in 1873, the crash involved a little railroad known as the St. Paul and Pacific, running out of St. Paul for a couple of hundred miles westward, with a branch to the north joining the Northern Pacific at Brainerd, Minnesota. The St. Paul and Pacific had been acquired in the interest of the Northern Pacific some years earlier but was now regarded as a property so worthless that its owners would be glad to get rid of it, if only they could find a purchaser rash enough to take it over.

During the three years following the panic of 1873 the crops of Minnesota were practically eaten up by the grasshoppers, and poverty reigned among the farmers. At that time a short, stocky man with long hair, one blind eye, and the reputation of being the greatest talker in town, kept a coal and wood store in St. Paul. His name was James J. Hill. For years he had been a familiar figure, sitting in his old chair in front of his store

and discoursing on current events. This man was not only an interesting talker; he was a visionary, a dreamer — and one of his dreams was to buy the St. Paul and Pacific Railroad and to transform it into a real railway line. Nearly twenty years had passed since he had drifted in, an eighteen-year-old Scotch-Irish boy from Ontario, and had begun work in a steamship office on the levee at St. Paul. Now, in 1876, he was thirty-eight years old and a town character. And the town felt that it had his measure. He had already tried a variety of occupations, and at this time was agent for lines of steamboats on the Mississippi and the Red River. Everybody knew him and liked him, but no one took him very seriously. The idea of his controlling the St. Paul and Pacific was even amusing.

Now the most promising part of the St. Paul and Pacific when it failed in 1873 was the line from St. Paul to Breckenridge on the Red River. Hill was the Mississippi steamboat agent at one end; at the other, an old Hudson Bay trader, Norman W. Kittson, ran two little old stern-wheel steamboats from Breckenridge to Winnipeg. A large part of the freight that Hill and Kittson handled was for the Hudson's Bay Company. It came up

the Mississippi, went across on the St. Paul and Pacific to Breckenridge, and then down the Red River on Kittson's steamboats until it was received at Fort Garry, Winnipeg, by Donald Alexander Smith, then commissioner for the Hudson's Bay Company.

Smith, who became afterwards Lord Strathcona and High Commissioner for Canada in England, was a tall, lean, urbane Scotchman with a soft manner and a long red beard. In 1876 he was fifty-six years old, with a life of strange, wild adventure behind him. He had gone when little more than a boy to Labrador to take charge of a station of the Hudson's Bay Company. Among the northern Indians he stayed for thirteen years. In the sixties he was practically king over all the savage territory of the company along the waters entering Hudson Bay. By the seventies he was a man of means and he had some influence in the new Dominion of Canada.

It would be a great advantage to Smith to have a good railroad from St. Paul to Winnipeg as the Red River boats were frozen up in the winter and the service on the St. Paul and Pacific, under the receiver, was impossible. So Smith listened with favor to Hill's project of getting hold of the St.

Paul and Pacific and making a real railroad out of it. And whenever Smith went to Montreal he talked the matter over with his cousin George Stephen — later Lord Mount Stephen — who was the head of the Bank of Montreal. In 1877 Stephen and Richard B. Angus, the general manager of the Bank, went to Chicago on business. While there, they had two weeks' time on their hands, and tossed a penny to decide whether to run down to St. Louis or up to St. Paul. The penny sent them to St. Paul. "I am glad of that," said Stephen; "it will give us a chance to see the prairies and look over that St. Paul and Pacific road that Donald Smith is always talking about."

When they arrived in St. Paul, James J. Hill took them over the line to Breckenridge. The country had been scoured by the grasshoppers and looked like the top of an old rusty stove. But Stephen was a broad-minded man, wise enough to know that the pest of grasshoppers could not last forever. He was greatly impressed with the ultimate possibilities of the soil and, under the hypnotic influence of Hill's eloquence, became quite enthusiastic over the scheme for getting hold of the railroad; but, as it would evidently involve millions, he didn't see how it could be done.

The road had originally been financed by bonds sold largely in Holland, and to do anything at all it was necessary to get in touch with these Dutch bondholders. In 1877 Stephen went over to Amsterdam and secured an option on the bonds at thirty cents on the dollar — less than the accrued interest which was due and unpaid on them. He then came back to America, conferred with John S. Kennedy at New York, who represented both Dutch and American bondholders, and brought Kennedy into the combination.

In the spring of 1878 the St. Paul and Pacific was taken over. People still smiled at Hill and wondered how he had induced a hard-headed bank president like Stephen to put up the money. Nobody in St. Paul believed in the future of the road. Even the syndicate's attorneys, when offered a choice between taking $25,000 in cash or $500,000 of the new road's stock for their services, preferred the cash. Had they taken the stock and held it for thirty years, they would have had, in principal and interest, some $30,000,000.

To the surprise of everybody, including Hill and his friends, the grasshoppers suddenly disappeared in the early summer of 1877 and never came back. That summer saw the biggest wheat crop that

had ever been harvested in Minnesota. "Hill's Folly," as it was afterwards called, with its thirty locomotives and few hundred cars, was feverish with success. Hill worked every possible source to get extra cars and went all the way to New York to buy a lot of discarded passenger coaches from the Harlem Railroad. By the end of the season it was evident to everybody that the St. Paul and Pacific was going to have a career and that "Jim" Hill's dream was coming true.

Immediately the fortunate owners began to plan for the future. They had acquired the road at an initial cost of only $280,000 in cash. In the following year they advanced money for the completion of the unfinished section, as necessary to obtain the benefit of a generous grant of land from the State. Then, in 1879, having acquired full possession of the property, and having several millions of dollars in profits, they issued bonds for further developments. This gave them sufficient basis to enlarge their scheme greatly, and in the formation of the St. Paul, Minneapolis and Manitoba Railroad, they created $15,000,000 of stock, which was divided equitably among Hill, Stephen, Angus, Smith, Kennedy, and Kittson. This stock was all "water," but the railroad prospered so

extraordinarily in the succeeding few years that by 1882 the stock was worth $140 a share. And in 1883 they issued to themselves $10,000,000 of six per cent bonds for $1,000,000 — a further division of $9,000,000, coming out of nothing but good will, earning power, and future prospects.

The decade from 1880 to 1890 witnessed a steady growth of the system formed in 1879 under the name of the St. Paul, Minneapolis and Manitoba. The 600 odd miles which it embraced when Hill and his coterie made their big stock division had grown in 1890 to 2775 miles. It then consisted of a main line reaching from St. Paul and Minneapolis across Minnesota and the northern part of North Dakota, far into Montana, with a second main line from Duluth across Minnesota to a junction with the St. Paul line in North Dakota, besides numerous branches reaching points of importance in both these States.

But the development of the Hill properties had by no means reached its limit at this time. Hill's dream had been to construct a through line across the northern tier of States and Territories to the Pacific, and this plan had been constantly in his mind while he was building up the system in Manitoba. The original line running up into Manitoba

and reaching Winnipeg was all very well as a start. It had paid so well that the original group of men had become millionaires almost overnight. But Hill meant to show the public that, after all, the early success was only an incident and merely a stepping-stone to the really great thing.

Practical railroad men everywhere ridiculed the idea of a railroad running across the far northern country, climbing mountain ranges, traversing hundreds of streams and extending for great stretches through absolutely wild and uninhabited regions. Especially did they deem it absurd to attempt such an undertaking without government aid, subsidies, or grants of land, pointing to the experience of such roads as the Union Pacific, Northern Pacific, and Santa Fé. All these had received financial assistance and large land grants, and yet all had gone through long periods of financial vicissitude before they had become profitable and stable enterprises.

But Hill was more farseeing than his critics. In 1889 the name of the company was changed to the Great Northern Railway, and under this title the extension to the coast was rapidly carried forward and was opened in the panic year of 1893. When all the other transcontinental lines went into

bankruptcy, Hill's road not only kept out of the courts but actually earned and paid annual dividends of five per cent on its stock. The five years from 1896 to 1901 were years of uninterrupted prosperity for the Great Northern Railroad. Each year its credit rose; each year it grew to be more of a force in the Western railway situation. In these years the control of the property had somewhat changed and a few of the original promoters had died or had withdrawn. But Hill, Lord Strathcona, Lord Mount Stephen, and John S. Kennedy of the original group, all held their large interests, and Hill in particular had added to his holdings as the years had gone by.

The secret of Hill's striking success with his Western extension was the method by which the line was constructed. Hill had a theory that it was far better to go around mountains and avoid grades than to climb them or to bore through them; it was always better to find the route which would make long hauls easy and economical. He thus built his road with the idea of keeping down the operating costs and of showing a larger margin of profit than the others. From the very start the Great Northern was noted for its low ratio of operating expenses and its comparatively long trains

and heavy trainloads. It was by this method that it really made its money.

By the year 1901 the Great Northern Railway absolutely controlled its own territory. But it was still handicapped by lack of an independent entrance into Chicago, as its eastern lines terminated at Duluth and St. Paul. At the western end also, the situation was unsatisfactory. It seemed important for the Great Northern to control a line of its own into Portland, Oregon, because the Northern Pacific Railroad, which, as we have seen, had been reorganized several years before by the Morgan interests, had been rapidly extending its lines in Oregon and Washington. Hill and his associates, therefore, had been quietly buying a substantial interest in the Northern Pacific property and thus, in the course of time, had come into closer relations with the Morgan group in New York. Soon afterward, under Hill's influence, the Northern Pacific began the construction of further extensions in Oregon and reached into territory that the Harriman interests in the Union Pacific Railroad had regarded as their own. This move created much friction between the Harriman and Hill groups, and in order to forestall danger Harriman in turn

began quietly accumulating an interest in the Northern Pacific property by purchases in the open market.

The story of the battle royal between the Hill and Harriman interests will be told in a subsequent chapter. It is not necessary to repeat the history of the famous corner of 1901 nor of the compromise effected by the formation of the Northern Securities Company. The final result of this contest was the complete harmonizing of the Western railroad situation, so far as the Hill and the Harriman interests were concerned. In the succeeding years the Great Northern system penetrated to the heart of Manitoba and constructed lines through British Columbia to Nelson and Vancouver. It built other branches to Spokane, Washington, and Helena and Butte, Montana. Moreover by the discovery of extensive ore deposits on the lines of the company in northern Minnesota and by subsequent purchases of other mines, the Great Northern acquired control of about sixty-five thousand acres and hundreds of millions of tons of iron ore. All the properties so controlled were leased on a very profitable basis to the United States Steel Corporation. The Great Northern Railroad itself did not retain control of the ore lands but,

through a trusteeship, gave a beneficial interest in them to its stockholders in the shape of a special dividend.

The profits under this lease promised to be very large in the course of time, but the Steel Corporation had the option to cancel after a five-year period, and in 1912, as the result of a United States Government suit for the dissolution of the Steel Corporation, the lease was canceled. Since that time the trustees of the ore lands have executed other leases, and the Great Northern ore certificates are bringing in a substantial return to their owners.

The three Hill lines — the Great Northern, the Northern Pacific, and the Chicago, Burlington and Quincy — have been unusually profitable. The Great Northern and the Northern Pacific have steadily paid liberal dividends to their stockholders on increasing amounts of capital stock; and the Burlington, whose whole stock is owned by these two roads, has also handed over liberal profits year by year, at the same time accumulating an earned surplus of more than one hundred million dollars and spending an almost equal amount of profits on the improvement and maintenance of the property. The Burlington today controls the Colorado

Southern, which extends southward from the Burlington lines in Wyoming, passing through Denver, Pueblo, Fort Worth, and other points southward to the Gulf.

CHAPTER X

THE RAILROAD SYSTEM OF THE SOUTH

In the year 1856 a small single-track railroad was opened from Richmond to Danville, Virginia. This enterprise, like many others in ante-bellum days, was carried out largely with funds supplied by the State. As long afterwards as 1867, three-fifths of the stock was owned by the State of Virginia, but soon after this time the State disposed of its investment to a railroad company operating a line in North Carolina from Goldsboro westward to Greensboro, and projected southward to Charlotte. In modern times, this little road, like the Richmond and Danville, has become an integral part of the Southern Railway system, but in those days it was controlled, curiously enough, by the Pennsylvania Railroad Company.

After 1867 the new owners of the Richmond and Danville began aggressively to extend their lines. By leasing the North Carolina Railroad, a small

property forming a link with the Greensboro line, they created a through route from Richmond to Charlotte. By 1874 they had built the road southward to Atlanta, Georgia, and had thus formed the first continuous route from Richmond to that city. Because of the extreme disorder and depression in the South during the years after the Civil War the line did not prosper and was sold under foreclosure about 1875. But the company was reorganized in 1878 and acquired the Charlotte, Columbia and Augusta, thus extending its lines into the heart of South Carolina and tapping a rich territory. During these early years the Pennsylvania Railroad interests, which still held control, supplied the funds necessary for making improvements.

At the same time that the Richmond and Danville was linking up the commercial centers of the southern Atlantic seaboard, another system — known as the East Tennessee, Virginia and Georgia — was being built up in the Appalachian Mountains to the west. This property and its predecessors had to some extent been state-owned enterprises at first, but in 1870 the Pennsylvania Railroad interests acquired control. A holding company called the Southern Railway Securities

Company was now formed for the purpose of controlling all the Pennsylvania Railroad interests south of Washington. Besides the properties mentioned, this Securities Company soon obtained several other Atlantic seaboard properties extending from Richmond to Charleston, and also the Memphis and Charleston Railroad, running from Memphis to Chattanooga.

Thus at this early day a considerable railroad system had been welded together in the South, reaching many points of importance and forming direct connection at Washington with the northern properties of the Pennsylvania system. Had this experiment been successful, we would perhaps today reckon the great Southern Railway system as part of the Pennsylvania group. But the outcome was disappointing; the roads did not prosper; and soon the poorer sections began to default. The Pennsylvania then disposed of its interests and left the roads to shift for themselves.

The East Tennessee was the best of these minor lines, and in 1877 it began to acquire others extending through the South. Soon it had penetrated the heart of Alabama, reaching what is today known as the Birmingham district. Additional extensions were made to Macon and Rome,

Georgia, and on the north an alliance was arranged with the Norfolk and Western, while with a view to securing some of the business of the West, a connection was constructed at Kentucky-Tennessee state line. Such was the condition of the East Tennessee property by the end of 1881. In the meantime the Richmond and Danville had practically stood still.

About this time a definite revival set in throughout the South as the long-drawn-out period of depression following the war came to an end. Railroad activity revived, and both the East Tennessee, Virginia and Georgia and the Richmond and Danville roads passed into the hands of new and more aggressive interests. The new owners constructed the Georgia Pacific, which ultimately stretched across Alabama and Mississippi. To finance this enterprise and to consolidate their interests, a new holding company — the Richmond and West Point Terminal Railway and Warehouse Company — was formed in 1881 with large powers and authority to acquire the stocks and bonds of railroad properties in many Southern States. In addition to the properties already named, the Virginia Midland Railway was now acquired, and by 1883 the entire system had been merged under

this organization. The company also secured the control of a line of steamboats running from West Point, Virginia, to Baltimore, and made close traffic arrangements with the Clyde line of steamers running between New York and Philadelphia and all important Southern points.

The personality at the head of the Richmond and West Point Terminal Railway and Warehouse Company was Calvin S. Brice, a man who had become increasingly prominent in railway affairs in the Southern States. Brice was something of a genius at combination and by 1883 had linked together and solidified the various properties in a very efficient manner. Nevertheless the competitive conditions of the time, combined with the necessarily more or less crude and hazardous methods adopted in financing and capitalizing the enterprise, prevented the credit of the organization from reaching a sound and secure level. The Tennessee properties especially proved an encumbrance, and they were almost immediately threatened with bankruptcy. Brice therefore decided to reorganize these subsidiary lines, and a new company called the East Tennessee, Virginia and Georgia Railway took over this section of the system in 1886.

In the meanwhile the Richmond and Danville properties, which were themselves becoming burdened with an ever growing debt, gave the Brice interests constant trouble. A large amount of the stock of the Richmond and Danville, as well as most of its bond issues, remained still outstanding in the hands of the public. Consequently the only way in which Brice and his friends could save the Richmond and Danville property from completely breaking up was to merge it more closely with the holding company in some way. But the credit and standing of the holding company itself were anything but high, for in addition to paying no dividends it had piled up a heavy floating debt of its own and had a poor reputation in Wall Street.

The situation thus becoming acute, the management carried through a remarkable stock-juggling plan. Instead of merging the Richmond and Danville directly into the West Point Terminal Company, the directors secretly decided to turn the Terminal Company assets over to the Richmond and Danville without apprising the stockholders of the Terminal Company. In conformity with this plan, early in 1886 the Richmond and Danville leased the Virginia Midland, the Western North Carolina, and the Charlotte, Columbia and

Augusta railroads, and later in the year the Columbia and Greenville and certain other small lines. At about the same time the Richmond and Danville obtained in some unknown way large amounts of the Terminal Company stock, a portion of which it now issued in exchange for stocks and bonds of certain of these subsidiary companies which it had leased. Having carried through these transfers, the Richmond and Danville then threw the remainder of its Terminal Company stock on the market, where it was bought by investors who knew nothing about these secret transactions.

The Terminal Company was now left high and dry so far as the Richmond and Danville was concerned. But at this juncture a surprising thing happened. The management of the Terminal Company, in its turn, began to buy shares of Richmond and Danville stock and in a short time regained its former control. This shifting of power exactly reversed the situation which had previously existed, when the Terminal Company itself had been controlled by the Danville Company. These changes were followed by a further move on the part of the Brice and Thomas interests, which now formed a syndicate and turned over to the Terminal Company a majority of the stock

of the East Tennessee Company for $4,000,000 in cash and a large amount of new Terminal Company stock.

When these transactions had been accomplished, the Terminal Company found itself once more securely in control of the entire system, and the Brice and Thomas interests had incidentally very considerably increased their fortunes and also their hold on the general situation. From this time, the Terminal Company went aggressively forward in an ambitious plan for further expansion. By acquiring control of the Central Railroad and Banking Company of Georgia, the Terminal management was involved with new financial interests which immediately sought to control the system and to eliminate the Brice and Thomas group. The consequent internal contest was adjusted, however, in May, 1888, by electing as president John H. Inman, a man who had been identified with the Central Railroad of Georgia system.

The Richmond Terminal system now put in motion further plans for expansion. In 1890 it acquired a system of lines extending south from Cincinnati to Vicksburg and Shreveport, known as the Queen and Crescent route, and in the meantime made a close alliance with the Atlantic Coast

Line system. By the end of 1891 the Richmond Terminal system embraced over 8500 miles of railroad, while the Louisville and Nashville, the next largest system in the Southern States, had only about 2400 miles.

But as 1891 opened, the vast Richmond Terminal system was perilously near financial collapse. Notwithstanding the great value of many of the lines, its physical condition was poor; the liabilities and capitalization were enormous; and much of the mileage was distinctly unprofitable. About this time many disquieting facts began to leak out: during the previous year the Richmond and Danville had been operated at a large loss, and this fact had been concealed by deceptive entries on the books; the dividends paid on the Central Railroad of Georgia stock had not been earned for some years; and the East Tennessee properties were hardly paying their way.

Various investigating committees were now appointed, and finally a committee headed by Frederic P. Olcott of New York took charge and worked out a complete plan of reorganization. The scheme, however, met with strenuous opposition, and thus matters dragged on into the panic period of 1893, when the entire system went into

bankruptcy and into the hands of receivers. The various sections were operated separately or jointly by receivers during this unsettled period, and it looked for some time as though an effective reorganization which would prevent the properties from entirely disintegrating could not be successfully accomplished.

In the dark days of 1893, after Olcott and the Central Trust Company had failed to effect a reorganization of the Richmond Terminal system, a new interest came to the rescue, represented by the firm of J. P. Morgan and Company, whose growing reputation was due to the unusual personality of J. P. Morgan himself. He was essentially an organizer. The railroad properties which had become more or less identified with the Morgan interests had for the most part prospered. It was felt that Morgan's banking-house was the only one in Wall Street which might be equal to the task. The proposal was made to him; he did not invite it. In fact, it is said that for some time he was much opposed to taking hold of this disintegrated and broken-down system of railroads operating largely in poor and unprogressive sections, populated for the most part by negroes. Said Morgan, "Niggers are lazy, ignorant, and

unprogressive; railroad traffic is created only by industrious, intelligent, and ambitious people."

After months of discussion, however, Morgan finally agreed to undertake the task, and out of the previous chaos there emerged the Southern Railway Company, which has been closely identified with Morgan's name ever since. Probably of the many railroad systems which Morgan reorganized from 1894 down to the time of his death, no system has become more distinctly a Morgan property than the Southern Railway Company.

The plan of reorganization whereby this great aggregation of loosely controlled and poorly managed Southern railroads was welded together into an efficient whole was a very drastic one in its effect on the old security holders. Debts were slashed down everywhere, assessments were levied, and old worthless stock issues were wiped out. Valueless sections of mileage were lopped off, and an effort was immediately made to strengthen those of real or promising value. Millions of dollars of new capital were spent in rebuilding the main lines; terminals of adequate scope were constructed in all centers of population; and alliances were made with connecting links with a view to

building up through traffic from the North and the West.

The first ten years of the Southern Railway system under the Morgan control were practically years of rebuilding and construction. While after ten years of work the main system still radiated through most of the territory already occupied in a crude way in 1894, yet it had acquired a large number of feeders and smaller railroads in other sections. The Mobile and Ohio, operating with its branches about one thousand miles from Mobile to St. Louis, Missouri; the Georgia Southern and Florida, furnishing an important connection from the main system to various points in the State of Florida; the Alabama Great Southern, operating in and near the Birmingham district of Alabama — all these properties were molded into the system during these years. The system was then rounded out toward the North and consolidated through joint control, with the Louisville and Nashville, of the Chicago, Indianapolis and Louisville Railroad, which operated lines northward into Ohio and Illinois and on to Chicago. Thus, with the lines of the Queen and Crescent route running southward from Cincinnati to New Orleans, the system secured a direct through line from

its various southern points to the shores of the Great Lakes.

In addition to these developments, the management of the Southern Railway system arranged direct connection with Washington through the joint acquisition with other lines of the Richmond, Fredericksburg and Potomac; it made traffic arrangements with the Pennsylvania and the Baltimore and Ohio systems to Baltimore, Philadelphia, and New York; and it also developed close alliances with the coastwise steamships plying northward from various Southern points.

In the reorganization of 1894 the Central of Georgia Railway system was cut off and separately reorganized, although it remained under the control of Morgan for a number of years. Finally in 1907 Morgan sold his Georgia properties to Charles W. Morse. They subsequently passed to Edward H. Harriman, who afterwards merged them into the Illinois Central system, under which control they have since remained.

As compared with the old Richmond Terminal aggregation with its broken-down rails and roadbed, poor equipment, and miserable service, the modern Southern Railway system shows startling changes. The Southern States have grown

enormously in population and wealth during the last generation; the industrial activities of the South at the present time are elements of large importance to the country as a whole. Cities have vastly increased in population; new towns and manufacturing districts have been built up; and at the present there is scarcely a mile of unprofitable railroad in the entire 9000 miles under operation. In recent years large soft coal deposits have been discovered and developed on many of the branch lines, and today the coal tonnage of the Southern Railway is exceeding the relatively unstable lumber tonnage of two or three decades ago.

CHAPTER XI

THE LIFE WORK OF EDWARD H. HARRIMAN

In a previous chapter there has been related the early history of the great line that first joined the Atlantic and the Pacific Oceans — the Union Pacific. But the history of this property in recent years is almost as startling and romantic as its story in the sixties and seventies. It was not until recent days that the golden dreams entertained by these early builders came true. The man who really reaped the harvest and who at the same time gave the Union Pacific that position among American railroads which its founders foresaw was the last, and some writers think, the greatest of all American railroad leaders.

The Union Pacific, a bankrupt railroad in 1893, lay quiescent under the stress of the hard times that lasted until 1898. The long story of its tribulations hardly made it a tempting morsel for the men who were then most active in the railroad field.

In 1895 or 1896 the several protective committees which had been appointed to look after the interests of stockholders and defaulted bondholders had tried to induce J. P. Morgan to undertake the reorganization, but he had refused. To reorganize the Union Pacific meant that not far from one hundred millions of new capital would sooner or later have to be supplied, and there was no other banking-house in America at that time which seemed strong enough for the task. Smaller concerns were all involved in the Morgan syndicates or in other undertakings, and a combination of these at the moment seemed out of the question.

About this time the German-Jewish banking-house of Kuhn, Loeb and Company began looking into the situation. Kuhn, Loeb and Company were known as a very conservative but very rich concern with close connections in Frankfort and Berlin. Though it had been long established in New York it had not been identified with the railroad reorganization movement nor had it been prominent as an investing or underwriting institution. But now the active partner of the business, Jacob H. Schiff, set out seriously to persuade the various committees to adopt a plan of reorganization which he had devised. Though he made some

progress, he soon found much secret opposition and thought that Morgan might be quietly attempting to secure the property. Morgan, however, was not interested. The mystery was still unsolved.

The fact was that Edward H. Harriman, who for some years past had been a powerful influence in the affairs of the Illinois Central Railroad but who was unknown to the average Wall Street promoter and totally unheard of throughout the country, had made up his mind to reorganize the Union Pacific Railroad. He therefore began to work quietly with various interests in an attempt to tie up the property. But soon he, like Schiff, encountered serious opposition. He also immediately jumped to the conclusion that Morgan was secretly at work, and he called on Morgan for the facts. Morgan replied, as he had replied to Schiff, that he was not interested, but that he wished Harriman success.

As Schiff continued to meet with difficulty, he soon called on Morgan again. Again Morgan replied that he was not interested. "But," he said, "I think if you will go and see a chap named E. H. Harriman you may find out something."

Who was Harriman? Schiff had hardly heard of him and had never met him. How could a small

man like Harriman, with no money, no powerful friends, no big financial backing, reorganize a great system like the Union Pacific Railroad? The idea seemed ridiculous. Nevertheless, as the opposition continued, Schiff soon got in touch with Harriman. In the course of a conference, he warned this daring interloper to keep his hands off the Union Pacific. But Harriman was not moved by threats. On the contrary, he insisted that Schiff should leave the Union Pacific alone; that he himself had already worked out his plans to reorganize it. Schiff laughed at this idea, termed it chimerical, and asserted that Kuhn, Loeb and Company were easily able to obtain the needed one hundred millions or more through their foreign connections on a basis of from four to five per cent, and that in America no such sum of new capital could at that time be raised through banking activities at better than six or seven per cent.

Harriman then sprang his surprise on Schiff. For some years he had been financially interested in the affairs of the Illinois Central. This property had at that time higher credit than any other American railroad; it had raised large sums of capital in Europe on as low a basis as three per cent, and on most of its bonds paid only

three and one-half per cent interest. For nearly fifty years the property had been paying dividends with hardly an interruption, and altogether it had an enviable reputation as one of the soundest investments. Harriman's influence in the affairs of the company had been increasing quietly for years; the management had been left almost completely in his hands; and the directors were in effect largely his puppets, and a majority would do his bidding in almost anything he might propose.

Harriman now announced to Schiff that he intended to have the Union Pacific reorganized as an appendage of the Illinois Central. The necessary one hundred millions would be raised by a first mortgage on the entire Union Pacific lines at three per cent, and the mortgage would be guaranteed by the Illinois Central, while the latter company would receive a majority of the new Union Pacific stock in consideration for giving its guarantee.

Here was a poser for Schiff, who saw at once that if Harriman could use the Illinois Central credit in this way, he certainly could carry out his plan. Schiff soon found that Harriman would have no difficulty in using Illinois Central credit. The upshot of the matter was that the two men got together and jointly reorganized the Union

Pacific. Harriman was made chairman of the Board of Directors, and Kuhn, Loeb and Company became the permanent bankers for the new railroad system.

Thus with one bound Harriman had leaped to the forefront in American railroad finance and by a bold act which was characteristic of the man. For Edward H. Harriman was not only a hard-headed, practical business builder who like Morgan thought in big figures, but he was also a bold plunger, which Morgan was not. Possessing a vivid imagination, he not only saw far into the future but he also planned far into that same future. Morgan was also a man of vision, but his vision did not carry him far beyond the present. The things Morgan saw best were those immediately before him, while the things that Harriman saw best were at a distance. Morgan's big plans of procedure were based on what he saw in a business way in the near future; he reorganized his railroads with the idea of making them pay their way as soon as possible and of showing a good return on the capital invested. He thought little of what might be the outcome a decade or two hence or of what combinations might later be worked on the chessboard as a result of his immediate moves.

Morgan's mind was not philosophical; it was intensely practical.

While Morgan declined the proffered control of the Union Pacific on the theory that it was only a "streak of rust" running through a sparsely settled country and across an arid desert, Harriman dreamed of the great undeveloped West filling up with people during the following generation, of the empty plains being everywhere put under cultivation, and of the arid desert responding to the effects of irrigation on a large and comprehensive scale. He foresaw the wonderful future of the Pacific States — the opening up of natural resources in the mountains, the steady stream of men and women who would ultimately emigrate to this vast section from the East and from foreign lands and who would build up towns and great cities. At the same time, with that practical mind of his, Harriman calculated that the Union Pacific Railroad — situated in the heart of this huge area, having the most direct and shortest line to the Pacific, and with all traffic from the East converging over half a dozen feeder lines to Omaha and Kansas City — would haul enormous amounts of tonnage just as soon as the Western country revived from the depression

under which it had been struggling for half a dozen years.

When Harriman took hold of the Union Pacific he had already determined to absorb the Oregon lines, with their tributaries running up into the Puget Sound country and to the Butte mining district; to get hold of the Southern Pacific properties at the earliest possible moment; and to link the Illinois Central in some way to the Union Pacific so that the latter would have its own independent outlets to Chicago and St. Louis. All these plans he ultimately accomplished, as well as many others, some of which his farseeing imagination may have conceived then.

While Harriman was able very promptly to carry through his first scheme and recapture the Oregon lines, which had been separately reorganized as a result of the receivership, he found it a far more difficult matter to secure a dominating interest in the great system of railroads controlled by Collis P. Huntington. Huntington was a hard man to deal with. Himself one of the practical railroad magnates of his time, he also had the gift of vision and undoubtedly foresaw that the ultimate result must be a consolidation of the properties; but he fully expected that his company

would absorb the Union Pacific. Had it not been that during the panic period the Southern Pacific had heavy loads of its own to carry and that its credit was none too high, Huntington might then have attempted to gain control of the Union Pacific.

Events finally worked to the benefit of Harriman. When Collis P. Huntington died in 1900, it was in most people's minds only a question of time as to when the powerful Harriman interests would take over the Southern Pacific properties. Consequently there was no surprise when in 1901 announcement was made that the Union Pacific had purchased the holdings of the Huntington estate in the Southern Pacific Company and was therefore in virtual control.

By a master stroke the railroad situation in the West had been radically changed. The Huntington system comprehended many properties of large and growing value, which were now feeling the full benefit of the agricultural prosperity at that time spreading throughout the great Southwest. Aside from this prize, the Union Pacific acquired the main line to the Pacific coast which it had always coveted and thus added to its system over nine thousand miles of railroad and over four thousand miles of water lines, besides obtaining a grip on the

railroad empire of this entire portion of the continent not to be readily loosened by competitors.

At the same time that Harriman was strengthening his position on the west and south, the Great Northern and Northern Pacific properties, both now operated under the definite control of James J. Hill, were following a policy of expansion fully as gigantic as that of the Union Pacific. The Great Northern lines operating from Duluth to the Pacific coast had become powerful elements in the Western railroad situation, and Hill had devised many plans for diverting to the north the through traffic coming from the central section of the continent. He had established on the Great Lakes a line of steamships running from Duluth to Buffalo, and was also operating on the Pacific Ocean steamship lines which gave him a connection with Japan, China, and other oriental countries.

After the reorganization of the Northern Pacific Railroad, which fell under the domination of Morgan, the affiliations of the Hill and Morgan interests became very close, and in a short time Hill had as secure a grip on the Northern Pacific as he had always had on the Great Northern. This powerful combination looked like a menace to the Harriman-Kuhn-Loeb interests which controlled the

territory to the south and radiated throughout the State of Oregon. When, therefore, the Northern Pacific began a little later to build into territory in Oregon and Washington which the Union Pacific regarded as a part of its own preserves, much bad feeling was engendered between the two interests. Matters were brought to a climax in the spring of 1901 when the Harriman people suddenly made the discovery that the Hill-Morgan combination had been quietly buying control of the valuable Chicago, Burlington and Quincy Railroad, which operated a vast system west and northwest of Chicago, penetrated as far into the Union Pacific main-line territory as Denver, and connected at the north with the eastern terminals of both the Great Northern and Northern Pacific systems. This move meant but one thing to Harriman: the Hill-Morgan interests were trying to surround the Union Pacific and make it powerless, just as the Southern Pacific had attempted to do many years before.

Harriman now played one of his bold strokes. He immediately began to purchase Northern Pacific stock in the open market in order to secure control of that property. It was well known that while the Hill-Morgan alliance dominated the

Northern Pacific, it did not actually own a majority of the stock, and to secure this majority was Harriman's purpose. This move would effectually check the invasion of the Union Pacific territory by giving the Harriman interests a voice in the control of the Chicago, Burlington and Quincy.

The price of Northern Pacific common stock soared day after day until on May 9, 1901, it sold at $1000 a share, and a momentary panic ensued. At the time Morgan was on the ocean and could not be reached. His partners were apparently not equal to the emergency. But Harriman was. When the panic reached its height, both interests had purchased far more than a majority of Northern Pacific stock — in contracts for future delivery. It was seen that to insist on the delivery of shares which did not exist would not only bankrupt every "short" speculator, large and small, but would undoubtedly bring all Wall Street tumbling down like a house of cards. So, in the midst of the excitement, the two interests reached a compromise.

The outcome was the formation of the Northern Securities Company with a capital of $400,000,000, nearly all of which was issued to acquire the capital stocks of the Northern Pacific and Great

Northern railroads. All the properties, including the Burlington, thus came under the joint control of the Harriman and Hill groups. The division of territory on both the east and the west was worked out amicably: the Northern Pacific abandoned some of its plans for extensions in Oregon, and the Burlington system remained as it was, with the understanding that no extensions should be built to the Pacific coast. Later the Burlington acquired control of a cross-country system, the Colorado Southern, extending south to the Gulf, but to this day has made no attempt to build beyond the lines it owned to Wyoming in 1901.

As is well known, the Northern Securities Company was subsequently declared to exist in violation of the Sherman Anti-Trust Act, and on a decision of the United States Supreme Court in 1904 it was practically dissolved and all its securities were returned to the original holders. This dissolution left the Hill-Morgan interests in undisputed control of the Burlington properties, but harmonious relations had in the meantime been established among the contestants, assuring an equitable division of territory and traffic. The final outcome was that the Union Pacific Railroad Company, which had purchased with its large

surplus and by the use of its high credit many million dollars' worth of the capital stocks of the Great Northern and Northern Pacific railroads, received these stocks back after several years of great prosperity and after the appreciation in the market values of the stocks had exceeded $60,000,-000. There was no further necessity for holding them and most of the stocks were sold at the high prices of 1905 and 1906, with actual net profit for the Union Pacific Railroad in excess of $50,000,000. No such gigantic financial transaction as this had ever before been carried through by an American railroad corporation.

With an overflowing treasury in the Union Pacific, Harriman immediately turned his face toward the East. It had for years been one of his dreams to control a continuous line of railroad from the Atlantic to the Pacific. As early as 1902 he had all but completed negotiations for the acquisition of the New York Central lines in the interest of the Union Pacific; but this plan had met with opposition from the Vanderbilts and Morgan and had been dropped. Harriman now took advantage of an opportunity which presented itself to acquire for the Union Pacific what was practically a dominating interest in the Baltimore

and Ohio, a large block of whose stock was disposed of by the Pennsylvania Railroad. Harriman had already largely added to the Union Pacific's holdings in the Illinois Central. Jointly with the Lake Shore of the Vanderbilt system, the Baltimore and Ohio had, as already described, acquired a dominating interest in the Reading Company, including all the latter company's interests and affiliations as well as its entry into the New York district through control of the Central Railroad of New Jersey. Harriman, therefore, by a single stroke, now found himself in practical possession of a coast-to-coast system of railroads extending all the way from New York to San Francisco, Portland, and Los Angeles, and passing through all the important cities of the country. The Illinois Central system, operating nearly five thousand miles of road southward from Chicago to New Orleans, passing through St. Louis, with an arm reaching out to Sioux City on the west and a network of branches covering the Middle States, had thus become the great link welding together the eastern and western Harriman systems.

Later the Union Pacific acquired large interests in other properties and purchased substantial amounts of stock in the Atchison, Topeka and

Santa Fé, the New York Central. the St. Paul, and the Chicago and North Western railroads. It also acquired a dominating interest in the Chicago and Alton property, operating from Chicago to St. Louis, with Western branches. In the panic period of 1907, Harriman personally purchased from Charles W. Morse, who had acquired the property from Morgan a short time before, the entire capital stock of the Central of Georgia Railway, which he later turned over to the Illinois Central. The Central of Georgia lines connect at several points with the Illinois Central and have given the system various outlets on the South Atlantic seaboard.

Harriman died in September of 1909, and with his death the wizard touch was clearly gone. What would have been the later history of the Union Pacific had he lived can be only conjectured. The new management, with Judge Robert S. Lovett at its head, continued the broad and efficient operation which had characterized Mr. Harriman's régime, but it soon abandoned the policy of further growth and expansion. This alteration in policy, however, was perhaps more the result of changing conditions than of relinquishment of Harriman's aims. Many new laws for the regulation of the

railways had been passed, and in 1906 the powers of the Interstate Commerce Commission were greatly augmented. A period of reform had now begun, and after 1909 a wave of "progressivism" overspread the country. New interpretations were given to the Sherman Act, and suits were soon under way against all the railroads and industrial combinations which appeared to be infringing that statute. The great Standard Oil and Tobacco trusts were dissolved in this period, and a suit which was brought to divorce the Union Pacific and the Southern Pacific Company was finally decided against the Union Pacific, with the result that the two big properties were separated. The Union Pacific turned a large amount of its Southern Pacific stock holdings over to the Pennsylvania Railroad, in exchange for which it received from the Pennsylvania the remainder of the Baltimore and Ohio stock which the Pennsylvania interests had retained after the sale to the Union Pacific in 1906. Immediately after this, the Union Pacific management, seeing no particular advantage in retaining an interest in the Baltimore and Ohio, gave the shares to its own stockholders in a special dividend.

Thus, since Harriman's death, the Union Pacific

Railroad has once more returned to very much its original condition prior to its acquisition of the Southern Pacific. It still controls the Illinois Central and the Chicago and Alton and has investment interests in a large number of other railroads. It is still the premier system of the West and promises to remain so indefinitely; but the bold Harriman touch is gone and will never return.

CHAPTER XII

THE AMERICAN RAILROAD PROBLEM

DURING the last fifty years the railroad has perhaps been most familiar to the American people as a "problem." As a problem it has figured constantly in politics and has held an important position in many political campaigns. The details that comprise this problem have been indicated to some extent in the preceding pages — the speculative character of much railroad building, the rascality of some railroad promoters, the corrupting influence which the railroad has too frequently exerted in legislatures and even in the courts. The attempts to subject this new "monster" to government regulation and control have furnished many of the liveliest legislative and judicial battles in American history. Farmers, merchants, manufacturers, and the traveling public have all had their troubles with the transportation lines, and the difficulties to which these struggles have given rise

have produced that problem which is even now apparently far from solution.

Railroads had been operating for many years in this country before it dawned upon the farmers that this great improvement, which many had hailed as his greatest friend, might be his greatest enemy. It had been operating for several decades in the manufacturing sections before the enterprising industrialist discovered that the railroad might not only build up his business but also destroy it. From these discoveries arose all those discordant cries of "extortion," "rebate," "competition," "long haul and short haul," "regulation," and "government ownership," which have given railroad literature a vocabulary all its own and have written new chapters in the science of economics. The storm center of all this agitation concerned primarily one thing — the amount which the railroad might fairly charge for transporting passengers and freight. The battle of the people with the railroads for fifty years has been the "battle of the rate." This has taken mainly two forms, the agrarian agitation of the West against transportation charges, and the fight of the manufacturing centers, mainly in the East, against discriminations. Perhaps its most characteristic episodes have been

the fight of the "Grangers" and their successors against the trunk lines and that of the general public against the Standard Oil Company.

Even in the fifties and the sixties, the American public had its railroad problem, but it was quite different in character from the one with which we have since grown so familiar. The problem in this earlier period was merely that of getting more railroads. The farmer pioneers in those days were not demanding lower rates, better service, and no discrimination and anti-pooling clauses; they asked for the building of more lines upon practically any terms. This insistence on railroad construction in the sixties explains to a great extent the difficulties subsequently encountered. In a large number of cases railroad building became a purely speculative enterprise; the capitalists who engaged in this business had no interest in transportation but were seeking merely to make their fortunes out of constructing the lines. Not infrequently the farmers themselves furnished a considerable amount of money, expecting to obtain not only personal dividends on the investment but larger general dividends in the shape of cheap transportation rates and the development of the country. Even when the builders were more honest, their mistaken

enthusiasm had consequences which were similarly disastrous. The simple fact is that a considerable part of the Mississippi Valley, five or ten years after the Civil War, found itself in the possession of railroads far in excess of the public need. In the long run this state of affairs was probably not a great economic evil, for it stimulated development on a tremendous scale; but its temporary effect was disastrous not only to the railroads themselves but to the struggling population. The farmer had mortgaged his farm to buy stock in the road; and his town or county or State had subsidized the line by borrowing money which it frequently could not repay. When this property became bankrupt, not only wiping out these investments but leaving the agricultural population at the mercy of what it regarded as exorbitant rates and all kinds of unfair discriminations with high interest charges on its mortgages and high local taxes, the blind fury that resulted among the farmers was not unnatural.

Many of the railroad evils were inherent in the situation; they were explained by the fact that both managers and public were dealing with a new agency whose laws they did not completely understand. But the mere play of personal forces in themselves aggravated the antagonism. The fact

that most of the railroad magnates lived in the East added that element of absentee landlordism which is essential to most agrarian problems. Many of the Western capitalists were real leaders; yet it is only necessary to remember that the most active man in Western railroads in the seventies was Jay Gould, to understand the suspicion in which the railroad promoter of that day was generally held. It is significant that of all the existing railroad abuses, the one which seemed to arouse particular hostility was the free pass. There were many greater practical evils than this, yet the fact that most editors and public officials and politicians and legislators and even many judges rode "deadhead" was a constant reminder of the influence which this "alien" power exercised over the government and the public opinion of the communities of which it was theoretically the servant. Many of these roads had a greater income than the States they served; their payrolls were much larger; their head officials received higher salaries than governors and presidents. The extent to which these roads controlled legislatures and, as it seemed at times, even the courts themselves, alarmed the people. The stock-jobbing that had formed so large a part of their history added nothing to their popularity.

Yet, when all these charges against the railroads are admitted, the fundamental difficulty was one which, at that stage of public enlightenment, was beyond the power of individuals to control. Nearly all the deep-seated evils arose from the fact that the railroads were attempting to do something which, in the nature of the case, they were entirely unfitted to do — that is, compete against one another. When the great trunk lines were constructed, the idea that competition was the life of trade held sway in America, and the popular impression prevailed that this rule would apply to railroads as well as to other forms of business. To the few farseeing prophets who predicted the difficulties which subsequently materialized, the answer was always made that competition would protect the public from extortion and other abuses. But competition between railroads is well-nigh impossible. Only in case different companies operated their cars upon the same roadbed — something which, in the earliest days, they actually did on certain lines — could they compete, and any such system as a general practice is clearly impracticable. One railroad which paralleled another in all its details might compete with it, but there are almost no routes that can furnish

business enough for two such lines, and the carrying out of such an idea involves a waste of capital on an enormous scale. Probably the country received its most striking illustration of this when the West Shore Railroad in New York State was built almost completely duplicating the New York Central, with the result that both roads were nearly bankrupted.

While no one railroad can completely duplicate another line, two or more may compete at particular points. By 1870 this contingency had produced what was regarded as the greatest abuse of the time — the familiar problem of "long and short haul." Two or more railroads, starting at an identical point, would each pursue a separate course for several hundred miles and then suddenly come together again at another large city. The result was that they competed at terminals, but that each existed as an independent monopoly at intermediate points. The scramble for business would thus cause the roads to cut rates furiously at terminals; but since there was no competition at the intervening places the rates at these points were kept up, and sometimes, it was charged, were raised in order to compensate for losses at the terminals. Thus resulted that anomaly which

strikes so strangely the investigator of the railroad problem — that rates apparently have no relation to the distance covered, and that the charge for hauling a load for seventy-five miles may be actually higher than that for hauling the same load one hundred or one hundred and fifty miles. The expert, looking back upon nearly a hundred years of railroad history, may now satisfactorily explain this curious circumstance; but it is not surprising that the farmer of the early seventies, overburdened with debt and burning his own corn for fuel because he could not pay the freight exacted for hauling it to market, saw in the system only an attempt to plunder. Yet even the shippers at terminal points had their grievances, for the competition at these points became so savage and so ruinous that the roads soon entered into agreements fixing rates or formed "pools." In accordance with this latter arrangement, all business was put into a common pot, as the natural property of the roads constituting the pool; it was then allotted to different lines according to a percentage agreement, and the profits were divided accordingly. As the purpose of rate agreements and pools was to stop competition and to keep up prices, it is hardly surprising that they were not popular in the

communities which they affected. The circumstance that, after solemnly entering into pools, the allied roads would frequently violate their agreements and cut rates surreptitiously merely added to the general confusion.

The early seventies were not a time of great prosperity in the newly opened West, and the farmers, looking about for the source of their discomforts, not unnaturally fixed upon the railroads. Their period of discontent coincided with what will always be known in American history as "the Granger movement." In its origin this organization apparently had no relation to the dissatisfaction which its leaders afterward so successfully capitalized. Its founder, Oliver Hudson Kelley, at the time when he started the fraternity was not even a farmer but a clerk in the Agricultural Bureau at Washington. Afterward, when the Grangers had become an agrarian force to be feared, if not respected, it was a popular jest to refer to the originators of this great farmers' organization as "one fruit grower and six government clerks." Kelley's first conception seems to have been to organize the farmers of the nation into a kind of Masonic order. The Patrons of Husbandry, which was the official title of his society, was a secret organization, with

signs, grips, passwords, oaths, degrees, and all the other impressive paraphernalia of its prototype. Its officers were called Master, Lecturer, and Treasurer and Secretary; its subordinate degrees for men were Laborer, Cultivator, Harvester, and Husbandman; for women — and women took an important part in the movement — were Maid, Shepherdess, Gleaner, and Matron, while there were higher orders for those especially ambitious and influential, such as Pomona (Hope), Demeter (Faith), and Flora (Charity). Certainly these titles suggest peace and quiet rather than discontent and political agitation; and, indeed, the organization, as evolved in Kelley's brain, aimed at nothing more startling than the social, intellectual, and economic improvement of the agricultural classes. Its constitution especially excluded politics and religion as not being appropriate fields of activity. It did propose certain forms of business coöperation, such as the common purchase of supplies, the marketing of products, perhaps the manufacture of agricultural implements; but its main idea was to contribute to the social well-being of the farmers and their families by frequent meetings and entertainments, and to improve farming methods by collecting agricultural statistics and

by spreading the earliest applications of science to agriculture. The idea that the "Grange," as the organization was generally known, would ultimately devote the larger part of its energies to fighting the railroads apparently never entered the minds of its founders.

Had it not been for the increasing agricultural discontent against railroads and corporations in general, the Patrons of Husbandry would probably have died a painless death. But in the early seventies this hostility broke out in the form of minority political parties, the principal plank in whose platform was the regulation of the railroads. Farmers' tickets, anti-monopoly parties, and anti-railroad candidates began to appear in county and even state elections, sometimes achieving such success as to frighten the leaders of the established organizations. The chief aim of the discontented was "protection from the intolerable wrongs now inflicted on us by the railroads." "Railroad steals," "railroad pirates," "Wall Street stock-jobbers," and like phrases supplied the favorite slogans of the spirited rural campaigns. These parties, though much ridiculed by the metropolitan press, started a political agitation which spread with increasing force in the next forty years and in recent times

eventually gained the ascendency in both the old political parties.

The panic of 1873 and the unusually hard times that followed added fuel to the flame. It was about this time that the Patrons of Husbandry gave evidences of a new vitality, chiefly manifested in a rapidly increasing membership. On May 19, 1873, there were 3360 Granges in the United States, while nineteen months later, on January 1, 1875, there were 21,697, with a total membership of over seven hundred thousand. In the Eastern States the movement had made little progress; in the South it had become somewhat more popular; in such States as Missouri, Iowa, Kansas, Nebraska, Montana, Idaho, and Oregon, it had developed into almost a dominating influence. It is not difficult to explain this sudden and astonishing growth: the farmers in the great grain States seized upon this organization as the most available agency for remedying their wrongs and rescuing them from poverty. In their minds the National Grange now became the one means through which they could obtain that which they most desired — cheaper transportation. Not only did its membership show great increase, but money from dues now filled the treasury to overflowing. At the same time the

organs of the capitalist press began to attack the Grange violently, while the politicians in the sections where it was strongest sedulously cultivated it. But the leaders of the movement never made the fatal mistake of converting their organization into a political party. It held no political conventions, named no candidates for office, and even officially warned its members against discussing political questions at their meetings. Yet, according to a statement in the *New York Tribune*, "within a few weeks the Grange menaced the political equilibrium of the most steadfast States. It had upset the calculations of veteran campaigners, and put the professional office-seekers to more embarrassment than even the Back Pay." The Grangers fixed their eyes, not upon men or upon parties, but upon measures. They developed the habit of questioning candidates for office concerning their attitude on pending legislation and of publishing their replies. Another favorite device was to hold Granger conventions in state capitals while the legislature was sitting and thus to bring personal pressure in the interest of their favorite bills. This method of suasion is an extremely potent political force and explains the fact that, in certain States where the Granges were most

powerful, they had practically everything their own way in railroad legislation.

The measures which they thus forced upon the statute books and which represented the first comprehensive attempt to regulate railroads have always been known as the "Granger Laws." These differed in severity in different States, but in the main their outlines were the same. Practically all the Granger legislatures prohibited free passes to members of the legislatures and to public officials. A law fixing the rate of passenger fares — the maximum ranging all the way from two and one-half to five cents a mile — was a regular feature of the Granger programme. Attempts were made to end the "long and short haul" abuse by passing acts which prohibited any road from charging more for the short distance than for the long one. More drastic still were the laws passed by Iowa in 1874 and the famous Potter bill passed by Wisconsin in the same year. Both these measures, besides fixing passenger fares, wrote in the law itself detailed schedules of freight rates. The Iowa act included a provision establishing a fund of $10,000 which was to be used by private individuals to pay the expenses of suits for damages under the act, and this same act made all railroad officials and employees

who were convicted of violations subject to fine and imprisonment. The Potter act was even more severe. It not only fixed maximum freight rates, but it established classifications of its own. The railroads asserted that the framers of this law had simply taken the lowest rates in force everywhere and reduced them twenty-five per cent. But Iowa and Wisconsin and practically all the States that passed the Granger laws also established railroad commissions. For the most part these commissions followed the model of that established by Massachusetts in 1869, a body which had little mandatory authority to fix rates or determine service, but which depended upon persuasion, arbitration, and, above all, publicity, to accomplish the desired ends. The Massachusetts commission, largely owing to the high character and ability of its membership — Charles Francis Adams serving as chairman for many years — had worked admirably. In the most part these new Western commissions were limited in their activities to regulating accounting, obtaining detailed reports, collecting statistics, and enforcing the new railroad laws.

These measures, following one another in rapid succession, produced a national, even an international sensation. The railroad managements

stood aghast at what they regarded as demagogic invasions of their rights, and the more conservative elements of the American public looked upon them as a violent attack upon property. Up to this time there had been little general understanding of the nature of railroad property. In the minds of most people a railroad was a business, precisely like any other business, and the modern notion that it was "affected with a public interest" and that the public was therefore necessarily a partner in the railroad business had made practically no headway. "Can't I do what I want with my own?" Commodore Vanderbilt had exclaimed, asserting his exclusive right to control the operations of the New York Central system; and that question fairly well represented the popular attitude. That the railroad exercised certain rights of sovereignty, such as that of eminent domain, that it actually used in its operations property belonging to the State, and that these facts in themselves gave the State the right to supervise its management, and even, if necessity arose, to control it — all this may have been recognized as an abstruse legal proposition, but it occupied no practical place in the business consciousness of that time. Naturally the first step of the railroads was therefore to contest the

constitutionality of the laws, and while these suits were pending they resorted to various expedients to evade these laws or to mitigate their severity. A touch of liveliness and humor was added to the situation by the thousands of legal fare cases that filled the courts, for farmers used to indulge in one of their favorite agricultural sports — getting on trains and tendering the legal two and a half cents a mile fare, a situation that usually led to ejectment for nonpayment and then to a suit for damages. The railroads easily met the laws forbidding lighter charges for long than for short hauls by increasing the rates for the longer distances, and the laws fixing maximum rates within the State by increasing the rates outside the State. When the courts decided the cases against the railroads, as in most cases they did, these corporations set about to secure the repeal of the laws. They started campaigns of education, frequently through magazine or newspaper articles pointing out the injustice of the Granger laws and insisting that they were working great public damage. It is a fact that a decrease in railroad construction followed the Granger demonstration, and the friends of the railroads insisted that timid capital hesitated to embark in an enterprise that was constantly subject

to legislative attack. These campaigns succeeded much better than the more violent opposition to which the railroads had first resorted. The Western States in the majority of cases repealed their most drastic legislation. Nearly all the laws fixing maximum rates disappeared from the books, and even Iowa and Wisconsin substituted for these measures supervisory and advisory commissions after the Massachusetts model.

While the Granger movement thus failed effectively to curb the railroads, it succeeded in arousing great popular interest in the railroad problem and in placing before the public several of the most important details of that problem. Not the least of its achievements were the decisions which it obtained from the Supreme Court of the United States. The Granger cases are among the most epoch-making in American history, and they fixed for all time the principles of American policy in dealing with the railroad question. They are particularly worthy of study by those who have regarded the Supreme Court as the bulwark of social injustice and as a body which can always be relied upon to protect the rights of property against the interests of the masses. In its railroad decisions this charge hardly holds; for these Granger

cases sustain practically all the legal contentions made by the Granger legislatures.[1] The cases fixed for all time the point that a State, acting under the police power, may regulate the charges of a railroad even to the extent of fixing maximum rates. They even went so far as to hold that the right to fix rates is not subject to any restraint by the court on the ground of unreasonableness, a principle which the Supreme Court has reversed in more recent times. The courts also held that a State, at least until Congress acted, could regulate interstate commerce, but this decision also has since then been reversed. These subsequent reversals of decisions which were exceedingly popular at the time, however, not only constituted sound law but promoted the public interest, for they established that body of law which has made possible the present more comprehensive system of Federal regulation of railroads.

Meanwhile the demand for regulation was gaining strength in the Eastern States, but for somewhat different reasons. The farmers of New England, New York, and the Eastern region in general had

[1] The cases of particular interest were: Munn *vs.* Illinois, 94 U. S. 114; Peik *vs.* Chicago and Northwestern Railway Company, 94 U. S. 164; and Chicago, Burlington and Quincy Railway Company *vs.* Cutts, 94 U. S. 155.

not particularly sympathized with the Granger legislation; they already had great difficulty in competing with the large Western farms, and a reduction in rates to the seaboard would have made their position even less endurable. This attitude was unquestionably selfish but entirely comprehensible. The agitation for railroad reform in the East came chiefly from the manufacturing and commercial classes. Here the main burden of the complaint was the railroad rebate. This was a method of giving lower rates to large shippers than to small — charging the favored shipper the published rate and then, at stated periods, surreptitiously returning part of the payment. This was perhaps the most vicious abuse of which the railroads have ever been guilty. That the common law forbade the practice and that it likewise violated the implied contract upon which the railroad obtained its franchise was hardly open to dispute; yet up to 1887 no specific law in this country prohibited the practice. For many years the rebate hung over the American business world, a thing whose existence was half admitted, half denied, a kind of ghostly economic terror that seemed persistently to drive the small corporation to bankruptcy and the large corporation to dominating

influence. The Standard Oil Company was the "monster" that was believed especially to thrive upon this kind of sustenance, though this was by no means the only industry that maintained such secret relations with the railroads; the Carnegie Steel Corporation, for example, accepted rebates almost as persistently. It was not until 1879, when the Hepburn Committee in New York State had its hearings, that all the facts concerning the rebate were exposed officially to public view. The contracts of the Standard Oil Company with the railroads were placed upon the records and these showed that all the worst suspicions regarding this practice were justified. This disclosure made the railroad rebate one of the most familiar facts in American industrial life; and in consequence a demand arose for Federal legislation that would definitely make the practice a crime and also for some kind of Federal supervision to do effectively the work which the state commissions had failed to do.

By this time it was clear enough that the only hope of adequate regulation lay with the Federal Government. Congressman Reagan, of Texas, had for years been pushing a bill to regulate interstate commerce and to prohibit unjust discriminations by common carriers; other measures

periodically made their appearance in the Senate; but the Houses had been unable to agree and nothing had been done.

Two facts presently gave great impetus to the movement; in 1886 the United States Supreme Court, reversing its previous decision, decided that no State could fix rates for railroad lines outside its own borders, in other words, that interstate rates were exclusively within the jurisdiction of the Federal authority[1]; and a Senate committee, under the chairmanship of Shelby B. Cullom, conducted an investigation of railroad conditions which made clear the need of immediate reform. As a consequence, Congress passed the Interstate Commerce Act, which received President Cleveland's signature on February 4, 1887. This measure specifically made illegal rebates, pools, higher charges for short than for long hauls (when the hauls in question were upon the same road); it required railroads to file their tariffs, and it established a commission of five members, who had powers of investigation, including the right to make the companies produce their books. This commission received power to establish systems of accounting and the like, but it

[1] Wabash, St. Louis and Pacific Railway Company *vs.* Illinois, 118 U. S. 557.

had no prerogative to fix rates. Inadequate as this measure seemed to the radical element, it was generally hailed as marking the beginning of an era in the Federal control not only of railroads but of other corporations, and this impression was increased by the high character of the men whom President Cleveland appointed to the first board.

The Interstate Commerce Commission lasted essentially in this form for nearly twenty years. On the whole it was a failure. Such was the judgment passed by Justice Harlan of the United States Supreme Court when he remarked in one of his decisions that the commission was "a useless body for all practical purposes"; and such, indeed, was the judgment of the commission itself, for in its report of 1898 it declared that the attempt at Federal regulation had failed. The chief reasons for this failure, the commission said, were the continued existence of secret rates and the fact that published tariffs were not observed.[1] The managers of the great American railroad systems would not yet admit that the fixing of railroad rates was the concern of any one but themselves, and they

[1] But it should be added that the effectiveness of the commission as an administrative and regulating body was diminished by decisions of the courts, notably the decision of the Supreme Court in the maximum rate case. See 160 U. S. 479.

still regarded railroad management as essentially a private business. If they could obtain large shipments by granting special rates, even though they had to do it by such underhanded ways as granting rebates, they believed that they were entirely justified in doing so. Thus rebates flourished almost as much as ever, passes were still liberally bestowed, and pools were still formed, though they sometimes took the shape of "gentlemen's agreements."

In 1906, when President Roosevelt became intensely active in the railroad problem, conditions were fairly demoralized. Attempts to enforce the anti-pooling clause had led railroads to purchase competing lines, and when the United States Supreme Court pronounced this illegal, the situation became chaotic. The evils of over-capitalization also became an issue of the times. The Interstate Commerce Commission had become almost moribund, and there was a general sentiment that the trouble arose from the fact that the commission had no power to fix rates and that the solution of the railroad problem would come only when such power was vested in it.[1] The Interstate Commerce

[1] The Elkins Act of 1903 had, it is true, increased the effectiveness of the commission in dealing with discriminations, but it had not solved the problem of securing reasonable rates.

Act which became a law on June 29, 1906, was the outcome of one of the greatest battles of President Roosevelt's political life. The act increased the membership of the commission from five to seven members, placed under its jurisdiction not only railroads but pipe lines, express companies, and sleeping-car companies, added to the other familiar restrictions a "commodities clause," which prohibited any railroad from transporting a product which it had produced or mined, "except such articles or commodities as may be necessary and intended for its use in the conduct of its business as a common carrier" — this clause was intended to end the railroad monopoly of the coal mines — and made the failure to observe published tariffs a crime punishable with imprisonment. The amended law did not give the commission the right to fix rates in the first instance but did empower it, on complaint, to investigate charges and on the basis of this investigation to determine just maximum rates, regulations, and practices, though carriers were given the right of appeal to the courts.

Thus, in essence, the public had obtained the reform which it had been demanding for years. The reorganized commission did not hesitate to exercise its new powers. It soon began actually

fixing rates, and from being a half-alive despised institution it rapidly developed into one of the most powerful agencies of administration. In the succeeding ten years its powers were still further enlarged by acts of Congress and the privilege of fixing charges practically passed out of the hands of the railroads into the control of the Interstate Commerce Commission. The railroads, that is, practically lost the power to regulate their own income. Meanwhile, the progressive movement in American politics had led to the creation of commissions in most of the States, with similar authority over rate making within the States, besides exercising numerous other powers over service and capitalization. Many railroads fell upon evil days and receiverships again became common. Naturally the railroad managers attributed these calamities to the fact that they were so constantly being regulated; but they probably pushed this claim too far, for the causes of their troubles were more complex.

In 1916, in the heat of a political campaign, the Federal Government took a step which introduced a new principle into railroad management and made the roads practically helpless. The four brotherhoods of railroad operatives were making

demands for a so-called eight-hour day, and threatened a general strike that would paralyze all business and industry and throw the whole life of the nation into chaos. Properly to appreciate the consequences of this event, it is necessary to keep in mind the fact that the plea for an "eight-hour day" was spurious. An eight-hour day cannot be rigidly enforced on railroads; the workmen well knew this, and indeed they did not really demand such working hours. What they asked for was a full day's pay for eight hours and "time and a half" pay for all in excess of that amount; that is, they demanded an increase in wages. President Wilson, having failed in his attempt to settle the difficulty by arbitration, compelled a Democratic Congress over which his sway was absolute to pass a law — sponsored by Chairman Adamson of the House Committee on Interstate Commerce — which granted practically what the unions demanded. In passing this law, Congress asserted an entirely new power which no one had ever suspected that it possessed — that of fixing the wages which should be paid by common carriers and possibly by other corporations engaged in interstate commerce. The railroads immediately took the case to the United States Supreme Court, which

promptly sustained the law. This decision, unquestionably the most radical in the history of that body, declared virtually that Congress could pass any law regulating railroads which the public interest demanded.

And thus, after fifty years of almost incessant struggle with the public, was the mighty railroad monster humbled. It had lost power to regulate the two items which represent the existence of a business — its income and its outgo. The Interstate Commerce Commission was now fixing railroad rates, and Congress was fixing the amounts of railroad wages. It remained for the Great War to precipitate the only logical outcome of this situation — government control. The steadily increasing responsibilities of war soon told heavily upon all lines until, in the latter part of 1917, the whole railroad system of the United States had all but broken down. The unions were pressing demands for wage increases that would have added a billion dollars a year to their annual budgets. The fact that so large a part of the output of American locomotive works was being shipped to the Allies made it difficult for the American lines to maintain their own supply. Nearly all coastwise ships and tugs were utilized for war work, a large part of them had been

sent to the other side, and this put an additional strain upon the railroads. The movement of troops, the heavy building operations in cantonments and shipbuilding plants, the manufacture and transportation of munitions, all put an unprecedented pressure upon them. Everywhere there was great shortage of cars, equipment, and materials. Possibly the railroads might have risen to the occasion except for the fact that the enormous increase in the cost of labor and supplies made demands upon their treasuries which they could not meet. They repeatedly asked the Interstate Commerce Commission for an increase in rates, but this request was repeatedly refused. The roads were therefore helpless, and their operations became so congested as to create a positive military danger. Under these circumstances there was profound relief when President Wilson took over the roads and placed them under government control, with William Gibbs McAdoo, Secretary of the Treasury, in active charge.

McAdoo immediately took the step which the Administration, while the railroads were under private control, had steadily refused to sanction, and now increased the rates. These increases were so great that they made the public fairly gasp, but,

under the impulse of patriotism, there was a good-natured acquiescence. McAdoo also increased wages by hundreds of millions of dollars. His administration on the whole was an able one. He ignored for the moment the prevailing organization and managed the roads as though they constituted a single system. He instituted economies by concentrating ticket offices, establishing uniform freight classifications, making common the use of terminals and repair shops, abolishing circuitous routes, standardizing equipment, increasing the loads of cars and by introducing a multitude of other changes. All these reforms greatly increased the usefulness of the roads, which now became an important element in winning the war. Properly regarded, the American railroads became as important a link in the chain of communications reaching France as the British fleet itself. It is not too much to say that the fate of the world in the critical year 1918 hung upon this tremendous railroad system which the enterprise and genius of Americans had built up in three-quarters of a century. In February, 1918, Great Britain, France, and Italy made official representations to the American Government, declaring that unless food deliveries could be made as they had been prom-

ised by Hoover's food administration, Germany would win the war. McAdoo acted immediately upon this information. He gathered all available cars, taking them away from their ordinary routes, and rushed them from all parts of the country to the great grain producing States. All other kinds of shipments were discontinued; officials and employees from the highest to the lowest worked day and night; and presently the huge supplies of the indispensable food started towards the Atlantic coast. So successful was this operation that, on the 12th of March, the supplies so exceeded the shipping capacity of the Allies that 6318 carloads of food stood at the great North Atlantic ports awaiting transportation. This dramatic movement of American food supplies was an important item in winning the war and fairly illustrated the great part which the American railroads played in turning the tide of battle from defeat to victory.

BIBLIOGRAPHICAL NOTE

General literature on the history of American railroads is surprisingly scarce. While numerous volumes have been written in recent years on special phases of the railroad question, few histories of any real value are available. Probably the best outline history of American railroad development as a whole is still Arthur T. Hadley's *Railroad Transportation, its History and its Laws* (1885), but this necessarily covers only the earlier periods of railroad growth and its discussions are limited to the problems which confronted the carriers many years ago. An extremely valuable book (now out of print) giving a very complete picture of railroad building and expansion in the pre-Civil War period is *The Book of the Great Railway Celebration of 1857*, by William Prescott Smith. This is primarily a description of the opening of the Ohio and Mississippi Railway, which connected the Mississippi Valley for the first time with the Eastern seaboard. A volume of real value, but somewhat technical, giving a complete and accurate view of the reorganization period of the great railroad systems, from 1885 to 1900, is *Railroad Reorganization*, by Stewart Daggett (1910). This book contains outline sketches of the histories of nearly all of the large systems, as well as very accurate details of the financial reorganizations of all of the defaulted properties.

The most comprehensive history of any American railroad system is *The Story of Erie*, by H. S. Mott (1900), but even this is partially unreliable and much of it is compiled from unofficial sources. On the financial history of the Erie Railroad, the really valuable authority is Charles Francis Adams in his *Chapters of Erie* (1871). This book furnishes a full and accurate account of the régime of Daniel Drew, Jay Gould, James Fisk, Jr., and the famous "Erie ring," including "Boss" Tweed, and also throws side lights on the character and career of Commodore Vanderbilt. Among other important histories of particular railroad systems may be mentioned *The Union Pacific Railway*, by John P. Davis (1894) and *History of the Northern Pacific Railroad*, by Eugene V. Smalley (1883); but neither of these volumes covers the recent and more interesting periods in the development of these properties. To get a complete and satisfactory view of the later development of the Northern Pacific system, one must turn to modern biographical works, such as the *Life of Jay Cooke*, by E. P. Oberholtzer (1910), the *Memoirs of Henry Villard* (1909), and the *Life of James J. Hill*, by Joseph Gilpin Pyle (1916), which also recounts at length the rise and development of the Great Northern Railway system. But in these volumes, as in many biographies of great men, the authors often betray a bias and misrepresent facts vital to an understanding of the development of both of these railroad systems. A recent volume entitled the *Life Story of J. P. Morgan*, by Carl Hovey, although extremely laudatory and therefore in many ways misleading, contains valuable information about the development of the Vanderbilt lines after 1880 and also about the financial vicissitudes and rehabilitation

of the many Morgan properties, such as the Southern Railway, the modern Erie system, the Northern Pacific, the Reading, and the Baltimore and Ohio.

Some of the railroad companies many years ago themselves published histories of their lines, but most of these attempts were of little value, as they were always too laudatory and one-sided and evidently were usually written for political purposes. The best of this class of railroad histories was a book issued by the Pennsylvania Railroad many years ago, giving a record (largely statistical) of the growth and development of its lines. But this book has been long out of print and covers the period prior to 1885 only.

For original material on American railroad history, one must depend almost entirely on financial and railroad periodicals and official and state documents. By far the most valuable sources for all aspects of railroad building and financing during the long period from 1830 to 1870 are the *American Railroad Journal* (1832–1871) and *Hunt's Merchant Magazine* (1831–1870). Both of these periodicals are replete with details of railroad building and growth. And for the period from 1870 to the present time the best authority is the *Commercial and Financial Chronicle*, with its various supplements. The story of modern railroading is so intertwined with finance and banking that to get any broad and complete view of the subject one must consider it largely from the viewpoint of Wall Street. For facts regarding operation and management of modern railroads, the *Railroad Age-Gazette* also is extremely useful. By far the most valuable sources for railroad statistics, railroad legislation, and all related facts, are the annual reports and bulletins of the Interstate Commerce Commission.

which have been regularly issued since 1888. Many state commissions also have issued volumes of value.

The best account of the origin of the Granger laws is contained in S. J. Buck's *The Granger Movement* (1913). The beginnings of Federal regulation are traced in L. H. Haney's *A Congressional History of Railways in the United States, 1850–1887* (1910). The history of recent railroad regulation by state and Federal legislation, and of court decisions affecting the railroads, is clearly and succinctly told in William Z. Ripley's *Railroads: Rates and Regulation* (1912), and in Johnson and Van Metre's *Principles of Railroad Transportation* (1916).

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